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INSIDE DOPE

by GEORGE F. TAUBENECK

Story of the Week

Austin Jones—His Hobby
Pays Off In His Business

Sports Note

Gazing Into the Crystal Ball
Going Out on a Limb
Thought for the New Year
Vining's Vocational Advice

Story of the Week

After a battleship had anchored at a port on the Eastern Coast following an extended journey at sea, the Captain decided that a dance should be arranged for the officers. Preparations for this undertaking were assigned to a committee of ensigns.

Learning that a college for women was located in a nearby town, the ensigns traveled happily to that campus with the purpose of persuading the Dean to furnish at least a hundred of her feminine charges for the Captain's Dance.

The Dean received the young ensigns cordially, if stiffly, and consented to send a contingent of girls to the gala Officer's Dance. Furthermore, she assured the ensigns that she would select girls of the most sterling character for this honored social occasion.

"Just a moment, please, ma'am," interjected an ensign from Texas. "We aim to be fair about this. Can't you send some of that kind and some of the other kind?"

Austin Jones—His Hobby Pays Off In His Business

Have you ever been in the situation where you make the same mistake repeatedly? The staff of the NEWS prides itself in the fact that it makes very few errors, but we've had a lapse on one particular matter in the past few months that's really given us a red face.

The sin is one of "omission." Many of the photographs of industry meetings which appear in the NEWS are taken by Austin Jones, representative for the Kerotest Mfg. Co., manufacturer of refrigeration valves, fittings, and accessories. Austin makes his headquarters in Toledo.

When we publish pictures which Austin takes, we always mean to give him a credit line—but that's where we've fallen down badly in the past several months. Our most recent lapse was in connection with the pictures of the American Society of Refrigerating Engineers convention which were published in the Dec. 30 issue, including the very swell candid shot of the singing session.

While Austin is expert enough at picture-taking to be a professional photographer (his All-Industry Show shots were in many instances better than those made by professionals), his picture-taking activities are strictly a hobby with him—but a hobby that pays off in a business sense.

His photography has made him one of the most widely known men in the segment of the refrigeration industry into which his activity as a Kerotest representative takes him. He has helped to cement many a business relationship by the pictures that he has taken—and the prints that he has distributed to those who were in the pictures.

Sports Note

We'll wager an honest, pre-Roosevelt silver dollar that no one in the refrigeration industry kept closer tab on the Davis Cup tennis matches in Australia than our good friends in Lansing, Mich., Jim Tranter, Ed Thiele, Mrs. Worthington, and others at Kold-Hold.

And with good reason, too, for one of the Kold-Hold boys led the U. S. squad in defeating the Australians, and bringing the cup back to the

(Concluded on Page 8, Column 1)

Local Agreement on Terms May Violate Anti-Trust Law

ST. LOUIS—If a group of stores attempts to establish a common policy on instalment credit terms, they will probably be liable under the Sherman Anti-Trust law, according to legal opinions made public by Tom Clark, U. S. Attorney General, and counsel for the National Retail Credit Association.

Retail merchants here and in some other cities had been considering joint action to maintain tight credit terms following the recent relaxation of Regulation W, the Federal Reserve Board's credit regulation. The dealers fear that long terms may be offered as a competitive selling point.

"It may be pointed out that adherence by competitors to a plan for fixing prices or establishing pricing formulae where such competitors are aware of adherence by others to the plan, constitutes a combination within the scope of the anti-trust laws," declared Attorney General Clark in a letter to the National Retail Credit Association.

"Thus, the use of an organization such as a credit association to develop or maintain an arrangement for common action among competitors might well constitute or result in a combination, even though no formal commitment to adhere to the arrangement was required of any of the participants," added Mr. Clark.

L. S. Crowder, general manager of the national credit group, suggests that proposed community credit plans be submitted to the U. S. Department of Justice for opinion before they are put into effect.

Edison G-E Changes To 'Hotpoint, Inc.'

CHICAGO—Hotpoint, Inc. became the official name of Edison General Electric Appliance Co. Jan. 2, 1947, according to an action of the board of directors announced by R. W. Turnbull, president.

The new company name will carry the sub-title "a General Electric affiliate" to identify it as a part of the General Electric Co.

Asserting that the increased public acceptance of the brand name Hotpoint had obscured the company's former corporate name, Mr. Turnbull said, "we felt that now was the time to change and simplify the company name to match this acceptance." He added that Hotpoint 40 years ago was the first appliance manufacturer to advertise nationally and that millions of dollars have been invested in the establishment of this trade name.

The company is embarking upon a major enlargement program involving \$17,000,000 in capital and plant expansion in the Chicago area, which will result in the employment of several thousand additional skilled workers. The Chicago physical expansion will increase manufacturing capacities to triple facilities for the manufacture of electric ranges, water heaters, and dishwashers.

Copeland Strikers Accept Terms, Return to Jobs

SIDNEY, Ohio—The strike at the Copeland Refrigeration Corp. here was settled Dec. 24, and production was resumed Dec. 26. The Copeland plant had been strikebound since Nov. 1.

The strike was settled on terms which were substantially the same as those offered by the management before the strike was called. Local opinion was to the effect that if the secret ballot had been used in the strike call, the strike would never have taken place.

Dealers Still Have to Honor 'HH' Ratings

DETROIT — Appliance dealers handling materials listed on Schedules A and B to Priorities Regulation 33 must continue to honor all HH ratings presented to them for fulfillment, if the rating was issued prior to Dec. 24, 1946, the Civilian Production Administration has ruled.

The removal of housing priority controls by President Truman last month does not invalidate any priorities issued before Dec. 24, the agency pointed out.

PR 33 remains in force, and will continue to do so until changed or rescinded, a CPA official said. He added that he expected no change in Schedule A.

Under PR 33 dealers are required to hold 75% of their stock of Schedule A items for holders of priority ratings. Items on Schedule A include stoves and ranges for cooking and heating, space heaters, domestic oil burners and stokers, plumbing fixtures, and water heaters.

Replacing the old HH priority procedure as of Dec. 24 is the new Housing Permit Regulation issued by the Office of the Housing Expediter. This regulation offers no priorities assistance but still gives veterans preference in buying or renting (Concluded on Back Page, Column 1)

Westinghouse Plans No Broad Price Boost

MANSFIELD, Ohio—While prices of some Westinghouse appliances will probably have to be increased because of higher manufacturing costs, the company does not expect to make any general price increase, declared John H. Ashbaugh, vice president in charge of the Appliance Division, in a year-end statement quoted in the press.

Pointing out how costs are advancing, Mr. Ashbaugh pointed to the recent freight increase as an example. He said that the company is still losing money on many products, but expressed the hope that by increasing efficiency that this could be avoided and prices held at present levels.

The Westinghouse Appliance Division head predicted that production of appliances during the first six months of 1947 would probably be at the rate of the final quarter of 1946, but thought that there might be an increase of about 20% in the last half of the year.

Steel Prices Expected To Rise In January

CLEVELAND—Prices on steel will very likely go up shortly, indicate warehouses here and in other cities, as soon as warehousemen can determine what to charge in the face of the wave of price increases and extra charges coming from the mills themselves. Price announcements are expected early this month.

At present, sales are being billed at the old prices, with the exception of sheet and strip items which were advanced on Dec. 16. There is considerable variety, however, on the extras charged for added width and gauge, say warehousemen.

Besides these probable increases, customers will no doubt have to pay the 6% increase in freight rates which went into effect Jan. 1.

Demand for steel at warehouses continues high, and the warehouses were set back by the coal strike last month. Their inventories are reportedly the lowest in years, and little easing is expected before February or March.

Kelvinator Household, Commercial Sales Heads



D. A. PACKARD
Heads Kelvinator household sales.



H. C. PATTERSON
Has been appointed Kelvinator commercial sales manager.

Packard, Patterson Named to Key Posts

DETROIT—Appointment of D. A. Packard as Kelvinator household sales manager and H. C. Patterson as commercial sales manager was announced last week by Charles T. Lawson, vice president of Nash-Kelvinator Corp. in charge of Kelvinator sales.

Mr. Packard, assistant general sales manager since 1944, entered the retail appliance field in 1924, joining a public accountant firm in Denver. He was named general auditor of the Knight Campbell Music Co. in Denver in 1925, and from 1926 to 1929 was manager of (Concluded on Page 4, Column 1)

Police Boil Over When Radarange Tunes In

DETROIT — It is not known whether police broadcasts can be picked up on the new Radarange electronic cooking ranges, but the police here are quite annoyed by picking up the ranges on their radios.

Police Inspector Edwin Denstaedt moans that the police broadcaster sounds more like a Shanghai news commentator.

Apparently such doings have been going on throughout the country for the Federal Communications Commission has ruled that electronic range manufacturers will have to adjust their products so that the radio waves emitted do not interfere with frequency bands currently in use or with telephone communication.

Ranges already in use will have to be adjusted, the Commission declared.

400 to Exhibit At Heating Show Jan. 27

ASHVE & Warm Air Group
To Meet In Cleveland
During Exposition Week

CLEVELAND — With nearly 400 exhibitors signed up for the Seventh International Heating & Ventilating Exposition to be held in Lakeside Hall here Jan. 27 through 31, a good percentage of these represent air conditioning manufacturers who will show year-around and comfort cooling equipment.

The exposition is sponsored by the American Society of Heating & Ventilating Engineers, which will hold its fifty-third annual meeting during the show week. Thirty-third annual convention of the National Warm Air Heating & Air Conditioning Association will also be held that week—on Jan. 29 and 30.

The exposition is scheduled to open at 2 p.m. on Monday, Jan. 27, and will remain open until 10 p.m. For the rest of the week the show hours will be from 10 a.m. to 10 p.m., with the exception of the last day, Friday, Jan. 31, when the exposition will close at 6 p.m.

Attendance will not be opened to the public but will be limited to those who are "concerned with the purchase, installation, use, and sale of

Advance Registration

Attendance at the Heating & Ventilating Exposition will be limited to those having a genuine interest. All must register. This can be done in advance on special registration cards available from exhibitors. Readers of the NEWS who do not have these advance cards may obtain them by writing to the NEWS.

heating, ventilating, and air conditioning equipment," states the exposition management. All those attending will have to register to gain admittance.

Several exhibits are comprised of cooling units of various types. One is called "the most complete line of room and store coolers on the market" and embraces a wide range of types and capacities. Another exhibitor, offering a line of packaged window-type air conditioners, will stress features of design which adapt this line to mass production with the object of making such equipment available to a wide range of buyers at reasonable cost.

Complete air conditioning service for winter and summer is provided by another display. In this system air is filtered and forced through ducts, humidified in winter and dehumidified in summer. Cooling is effected by a commercial type refrigeration unit and cooling coil. Heat is furnished either by a pressure type (Concluded on Page 4, Column 3)

8,000,000th Product Is Turned Out at Frigidaire

DAYTON, Ohio—The eighth millionth electrical refrigeration product—a household refrigerator—produced by Frigidaire Division of General Motors, rolled off the assembly line Dec. 31 at the Moraine City plant here.

E. R. Godfrey, general manager, P. M. Bratten, general sales manager, and 12 other high company officials were on hand to mark the occasion.

Mr. Godfrey pointed out that the company reached the seven millionth mark late in 1941 shortly before the Frigidaire plants turned from peace- (Concluded on Back Page, Column 3)

Firemen Seek Adoption Of Bottled Gas Safety Regulations In Nebraska

LINCOLN, Neb.—A bill will be introduced at the 1947 session of the state legislature to establish regulations for refrigerators, ranges, and other appliances using liquefied petroleum gases, and empowering the state fire marshal to establish regulations for transportation, storage, and handling of such gases, the legislative committee of the Nebraska Volunteer Fireman's association decided at a meeting held here during December.

Need for prompt action was pointed out by Ralph T. Hawkins, Auburn, president of the association, who said that because Nebraska has no regulations it is becoming the dumping ground for appliances and other equipment which fail to measure up to the safety requirements of other states. State Fire Marshal E. C. Iverson reported that many inadequate installations have already been made and fires and explosions have resulted.

Industry representatives at the meeting reported that there are about 150,000 liquid gas installations in Nebraska at the present time, or nearly five times as many as existed in 1941. Such gas installations were greatly increased in 1946 in rural communities and small towns not served by regular gas mains, and the sale of these gas appliances is increasing by leaps and bounds, for use in household heating, cooking, refrigeration, power, and transportation.

Slow Freezer Delivery One Cause of Temporary Glut In Frozen Foods, Broker's Chairman Claims

NEW YORK CITY—Failure of deliveries on home freezers and retail store freezer cases to reach expectations this fall constitutes one reason for the present slow flow of frozen foods into consumption, says Fritz Baum, chairman of the Frozen Food committee of the National Food Brokers Association.

Mr. Baum, in a letter to the *Wall Street Journal*, denied that there is any excessive "glut" of frozen foods on the market and described the current situation in the frozen foods industry.

As freezers and cases are now being delivered, he said, an increase in the sale of frozen fruits and vegetables through retail stores and to the housewife is observed.

Another reason for the seeming glut, he declared, is the natural slowness of movement from October to December. The situation is also due to the general readjustment of prices and consumption of food in the country rather than to an overproduction of frozen food, he asserted.

This applies to many other processed foods, fresh fruits and vegetables, as well as frozen food, he pointed out.

Mr. Baum could foresee no reduction in the price of most fruit and vegetable items except berries, in 1947 unless Congress changes its present obligation to guarantee a support price for many farmers' products.

"As in the past," Mr. Baum de-

clared, "the sale of retail frozen fruits and vegetables is larger during the first six months of the year when fresh fruits and vegetables are scarce, and reaches its peak in the months of April and May."

"There seems to be no reason why the retail merchandise now in storage should not be absorbed before the new season starts."

The belief that there is a glut in frozen foods seems to be based on U. S. Department of Agriculture statistics which show that the monthly holdings of frozen fruits and vegetables in cold storage warehouses has increased about 50% above last year, according to Mr. Baum.

The solution to this abundance, Mr. Baum believes, lies in the development of the "institutional" market, which now has only enough to cover its requirements for a very short period of time.

When Frozen Foods Started

In his analysis of the present situation, Mr. Baum went right back to the very beginnings of the frozen food industry. He wrote:

"The frozen food industry had its origin in 1917 in cold-packing berries for use by preservers. During the '20's, cold-packed fruits became rapidly a desirable raw material for the manufacturing of ice cream and also for the bakers."

"At the same time, some packers froze vegetables for consumption by institutions and at the end of the

'20's and beginning of the '30's, through the Clarence Birdseye process, frozen fruits and vegetables were made available for consumption by the housewife."

"In the years before the war, the consumption of frozen food gradually increased, but during the war the increase in the production became tremendous."

"Many new packers entered the field of freezing food which includes, outside of fruits and vegetables, fish, seafood, poultry, meat, and pre-cooked food. Of the 450 to 500 frozen food packers now listed in directories, only about 200 can be considered as commercial packers of frozen fruits and vegetables."

3 Groups of Consumers

"There are now three groups of consumers of frozen fruits and vegetables:

"First, the manufacturing trade for fruits—the preservers, the ice cream manufacturers, the bakers, the flavoring extract manufacturers, and the baby and junior food industry. And for vegetables—the soup manufacturers, the canning industry, and the baby and junior food industry."

"Second, the institutional trade consisting of hotels, restaurants, Army, Navy, Air Force, steamships, dining car service of the railroads, hospitals, schools, prisons, and all other institutions."

"Third, the retail trade supplying the housewife."

"The U. S. Department of Agriculture reports monthly the holdings of frozen fruits and vegetables in the cold storage warehouses of the country which show, right now, an increase of about 50% above last year."

"This has led to the belief that there is a glut of frozen food. However, an analysis will prove that this 'glut' is not as great as it appears from the summary figure of about 860,000,000 lbs."

"Due to the price structure set up by the OPA and many other governmental regulations, there was an incentive for the frozen food packers to produce more retail merchandise for the third group than for the first two groups."

"The result was that the prices, particularly for berries, were increased unproportionately while the increase in the prices of vegetables has been a moderate one compared with prewar figures."

"In the figure of 860,000,000 lbs. there are included many tens of millions of pounds of frozen fruits and vegetables which are in the hands of manufacturers who are using these frozen raw materials during their off season time between January and June as is customary."

"Most of these manufacturers used hardly any frozen fruits and vegetables before the war. At the same time, the preservers and bakers, due to the sugar shortage and also partly due to the high price structure of frozen fruits, were not able to buy their usual quantities of frozen fruits, but it is felt that with a better sugar allocation in the second quarter of 1947, a great amount of frozen fruit will be consumed by the preservers and the bakers."

Institutional Market Ripe

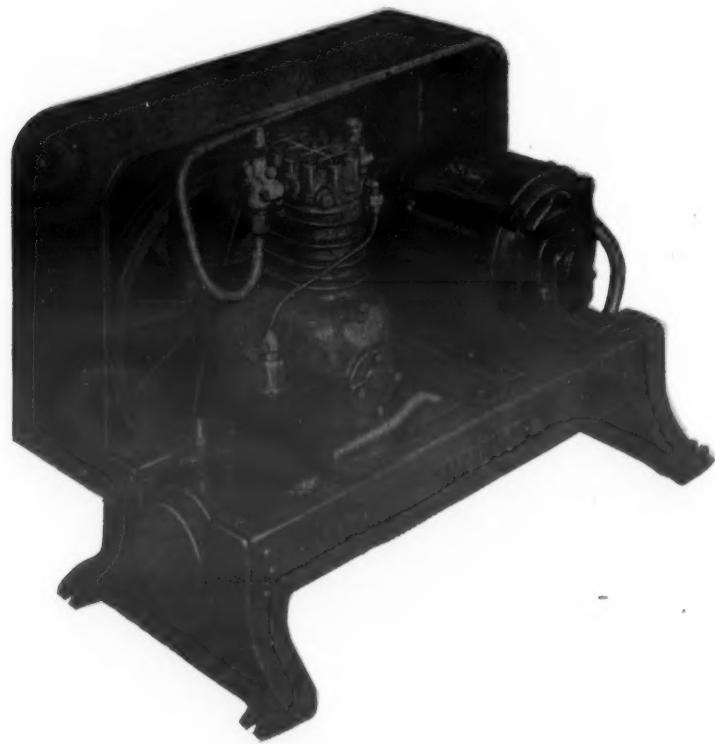
"Due to the fact that a great number of packers have put their efforts into the production of retail merchandise, the institutional distributor is only covered for his requirements for a short period of time, and it seems certain that all available institutional packed merchandise of quality now in cold storage will be fully absorbed even before the new pack starts."

"Many bank loans appear to have been made based on frozen food industry growth and promise rather than on careful analysis of the quality and desirability of the merchandise and the integrity and ability of the borrower."

"As in any young industry, many new packers and distributors of frozen food have appeared without sufficient financial foundation. An adjustment is necessary but this adjustment does not necessarily have to be painful for the industry as a whole."

"A packer can, without difficulty, switch from the packing of frozen food in retail packages to the packing of institutional sized containers."

Your friendship is our most valued asset.
Every Mills Condensing Unit is designed
and built to hold that asset carefully in trust.



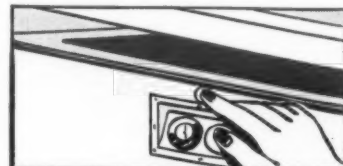
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Refrigeration Division

4100 Fullerton Avenue - Chicago 39, Illinois

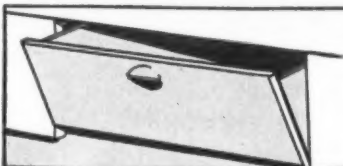


If you thought last year's AMERICAN Home Freezers led the field in quality and design . . . just wait until you see the new AR-8 for '47, with its "years ahead" sales features!

- Dual-purpose freezing—super-coiled Quick Freeze section as well as Zero-Storage compartment.
- All-aluminum cabinet, heavily insulated, hermetically sealed; light, strong, rustproof, with beautiful white, baked enamel finish.
- Self-opening top door . . . just touch the button. A great sales feature for housewives.
- Visual temperature indicator and thermostat control, conveniently located.
- Storage bin for packaging materials; wire dividers for extra convenience in storage compartment.



Touch-Button Door Opening



Storage Bin for Packaging Materials

Write for colorful literature and information about American farm, home and commercial Freezers, Aird-Air Bottle Coolers, Extensional Walk-In Coolers.

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● PEERLESS is ready with a helping hand to give your installations efficiency — the way to fortify your position in a strongly competitive market. Use PEERLESS products as a sure means of producing customer satisfaction.

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PLATES IN
BANK FORMATIONSNEW PEERLESS
FLASH PLATES

● PEERLESS FLASH PLATES are available NOW in QUANTITY for all low temperature applications such as locker plants, fixtures, domestic and commercial quick freezers, etc. Flat aluminum plates are mechanically bonded together by continuous copper or aluminum tubing. No joints — No leaks! Uniform distribution of refrigerant and non-ferrous high conductivity insure fast action and low operating cost. Aluminum provides own durable finish. Extreme light weight saves shipping costs.

● Make a PEERLESS CAPACITY BOOSTER a part of every installation! The marked increase in efficiency satisfies! New Model AA is precision engineered from seamless copper tubing with parallel connections throughout. Inlet and outlet liquid and suction connections are brazed by new process which banishes leaks. The exclusive PEERLESS THERMEK heat transfer surface is unrivaled in performance. Models B and C, for larger installations, incorporate like basic design. Every job, new or old, should be equipped with a PEERLESS CAPACITY BOOSTER.

NEW
CAPACITY
BOOSTER
PACKAGE

CAPACITY BOOSTERS

● Other PEERLESS products, illustrated at left, are designed to provide the highest degree of efficiency. The satisfaction your customers get NOW counts for future sales and profits — a solid reason for teaming up with PEERLESS!

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PEERLESS of AMERICA, Inc.

General Sales Offices . . . 2901 Lawrence Ave., Chicago 25, Illinois

Kelvinator--

(Concluded from Page 1, Column 4)
the company's radio and music sales department. In 1930 he became Denver zone manager of General Motors Radio, later becoming sales manager at Chicago.

He operated his own appliance dealership in Des Moines in 1932, and the following year became sales manager of the St. Louis branch of one of the major refrigerator manufacturers. He was subsequently appointed representative of that company's department and furniture store division and for five years was manager of the division. Mr. Packard joined Kelvinator in 1940 as eastern sales manager.

Mr. Patterson, Kelvinator's Western regional manager until his new appointment, joined the company in 1937 as a district manager. Entering the sales field in 1918 with National Cash Register, he was later sales manager of the V-K Pump Co., and eastern sales manager of the Delco Light Co. From 1933 to 1937, Mr. Patterson was account executive with Geyer, Cornell & Newell, advertising agency. Mr. Patterson was Kelvinator zone manager from 1939 to 1942, and during the war represented Nash-Kelvinator Corp. in Washington.

Bohn Workers End Strike

ADRIAN, Mich. — A week-long walkout at Plant 13 of the Bohn Aluminum & Brass Corp., reportedly caused by the discharge of two union members accused of failing to meet production standards, was called off Dec. 27.

Universal Cooler Names Ventilating Show to Open Jan. 27-- Rose to New Post



S. T. ROSE

MARION, Ohio—S. T. Rose has been appointed Director of Industrial Relations of Universal Cooler Division International Detrola Corp., it has been announced by Frank S. McNeal, vice president of IDC and general manager of the division.

Mr. Rose comes to Universal following a three-year association with Ranco, Inc., manufacturer of refrigeration controls in Columbus, Ohio. At Ranco he was a personnel director, director of contract termination, and also in charge of government contract renegotiations.

(Concluded from Page 1, Column 5)
oil burner or a ribbon type gas burner through a heat exchanger designed to afford direct airflow and long travel for the hot gases.

There is also a new window ventilator, incorporating a filter and silencer, adjustable to bring in outside air exclusively, or recirculate or exhaust inside air or to provide adjustable mixtures, all in controllable volumes from 100 to 480 c.f.m.

A line of refrigeration exchangers, water chillers, liquid line exchangers, and other appliances is also scheduled for display. Another includes centrifugal compressors, "Freon-12" refrigeration units, evaporative condensers, self-contained air conditioners and self-contained ammonia refrigeration units. Blowers and blower wheels stamped from continuous strip steel, propeller fans and a series of gas-fired forced-air furnaces will comprise one exhibitor's display.

NEW FAN LINE PLANNED

An exhibit of direct-driven ventilating fans, said to be the only equipment of its kind in which motors and fans are designed and built as one complete unit, offer several special design features. The fabricated monel metal construction incorporates spherical hub and ring construction. Weatherproof, direct-connected motors have permanently sealed ball bearings and are shock-mounted and completely enclosed.

The manufacturer of a well-known line of ceiling outlets, registers, and grilles will show a new line of temperature control products which includes new, improved, and attrac-

tively styled room type thermostats, hygrometers, proportioning controls, oil-submerged control motors, and valve operators. New air distribution products in the same line include an air-turning unit combined with volume control and a factory-fabricated air turning vane.

Wholly new to most show visitors will be the method of dehumidifying and controlling air to a designated dewpoint, which was instrumental in setting up the U. S. Navy's "Operation Mothball," which is used in laying up ships and also in preserving cargoes in marine transport. This system has been installed or specified for 221 merchant vessels sailing under 26 American, British, Brazilian, and Scandinavian house flags and has attracted wide attention in engineering circles.

Heating and ventilating units made by 40 manufacturers in the gas industry will be represented in a group exhibit. Included in the list of all-gas equipment in this large display are: air conditioning, warm air, forced warm air, hot water and steam furnaces; conversion burners; circulating and space heaters, also control equipment of various kinds.

Heating furnaces of all types are now offered in "packaged" form, completely housed in attractively finished casings. With the appearance of machinery and mechanical connections minimized as far as possible, they contrive the practical abolition of the old-fashioned furnace room with its odors, dirt, and dust.

BASEMENT PLANNING KIT

Capitalizing this trend, which covers all classes of apparatus, a manufacturer of oil-fired furnaces and boilers has provided its distributors with a brochure on basement playroom planning which includes a planning kit complete with layout sheet and cut-outs of furniture and equipment. This manufacturer's products are completely new from firing head to heat exchanger and represent marked improvements over prewar heating units.

Another manufacturer will not only exhibit a complete line of automatic heating equipment for oil, coal, or gas, but also a complete range of electrically operated water systems and gas-electric generator units for use in farms and homes beyond the reach of rural electrification.

Designers of forced warm air furnaces have paid a great deal of attention to the coordination of heating and air circulation. In several instances the speed of the fan or blower is adjusted according to the bonnet temperature of the furnace.

A different construction is that of

a winter air conditioning furnace to be shown in which dampers under thermostatic control vary the respective volumes of warm and cold air in circulation in accordance with the varying heat output of the furnace.

One of the major events of the annual meeting of the American Society of Heating & Ventilating Engineers will be the formal dedication of the society's new research laboratories in Cleveland. The ASHVE will headquarter in the Hotel Statler here, but the first session, Monday morning will be held at the laboratory building at 7218 Euclid Ave.

ASHVE PAPERS SCHEDULED

Among the papers scheduled for presentation during the ASHVE technical sessions are "Air Flow Into Suction Openings" by A. D. Brandt and R. J. Stoffy (Monday morning); "Dehumidification—Methods and Applications" by John Everetts, Jr. (Tuesday morning); "Rating Dynamic Dehumidification Equipment" by E. R. Queer and E. R. McLaughlin (Tuesday morning); "Minimum Replenishment of Air for Living Space Under Conditions of Mechanical Cooling" by W. V. Consolazio (Wednesday morning).

A forum on panel and radiant heating is scheduled for Tuesday afternoon, while on Thursday afternoon the ASHVE will hold a joint meeting with the National Warm Air Heating & Air Conditioning Association.

During the ASHVE meeting results of the annual election will be announced. Voting is now in progress on the following candidates: B. M. Woods, for president; G. L. Tuve, for first vice president; A. E. Stacey, Jr., second vice president; and J. F. Collins, Jr., treasurer.

Several talks have been lined up for the thirty-third annual meeting of the National Warm Air Heating & Air Conditioning Association, to be held Wednesday and Thursday, Jan. 29 and 30, at the Hotel Cleveland. Sessions will be held the morning and afternoon of each day. The Wednesday afternoon meeting will be devoted largely to a presentation of a sample Indoor Comfort Conference being scheduled for dealer training in major cities throughout the country during 1947.

Sunday, Jan. 26

10 a.m.—Committee meetings.
1 p.m.—Registration (Hotel Statler).
1:30 p.m.—Council meeting.
2 p.m.—Committee meetings.

Monday, Jan. 27

8:30 a.m.—Registration (Hotel Statler).
10 a.m.—Opening session (Research Laboratory). Dedication of laboratory, reports of officers, committees, and election tellers. One technical paper.

12 noon—Research luncheon (Quad Hall restaurant, 7500 Euclid Ave.).
12:45 p.m.—Inspection trips.
2 p.m.—Opening of Exposition (Lakeside Hall).
2:30 p.m.—Chapter delegates meeting (Research Laboratory).
9:30 p.m.—"Operation Relaxation" (Hotel Statler ballroom).

Tuesday, Jan. 28

8:30 a.m.—Registration (Hotel Statler).
9:30 a.m.—Technical session (Hotel Statler ballroom). Three papers.
2 p.m.—Panel and radiant heating forum.
5:30 p.m.—Social hour (Hotel Statler Euclid Room).
6:30 p.m.—Past presidents' dinner (Hotel Statler Tavern Room).

Wednesday, Jan. 29

9:30 a.m.—Technical session (Hotel Statler ballroom). Three papers.
12:45 p.m.—Inspection trip.
2 p.m.—Chapter delegates meeting (Hotel Statler Lattice Room).
7 p.m.—Annual banquet (Hotel Statler ballroom).

Thursday, Jan. 30

9:30 a.m.—Technical session (Hotel Statler Euclid ballroom). One paper; installation of officers.
2:30 p.m.—Joint session with National Warm Air Heating & Air Conditioning Association. Two papers.



ALL ONE PIECE

The fins on this Wolverine TRUFIN are extruded from the tubing itself—thus the fins and body are one and the same metal. The fins cannot come off.

That is one of the main reasons why TRUFIN is selected for use in equipment where heat transfer is required—especially in cases where vibration may be encountered.

Because TRUFIN presents nearly four times the surface area of plain tube, it is obvious that this tube can do a better job in much less space than is possible with plain tube.

TRUFIN is available in a variety of fin spacings, heights and alloys. It can be bent and formed nearly as readily as plain tube.

WHO'S WHO AMONG WOLVERINE REPRESENTATIVES



G. D. POTTER

STEEL SALES CORP., 3348 S. PULASKI ROAD, CHICAGO 23, ILLINOIS

Serves the States of: Illinois, Indiana (except cities of Evansville, Jeffersonville and New Albany), Wisconsin, Missouri, Iowa, Minnesota, North Dakota, South Dakota, Nebraska, Kansas.



Send for Wolverine Trufin Data; Forms 651 and 652.
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WOLVERINE

TUBE DIVISION

CALUMET & HECLA CONSOLIDATED COPPER COMPANY

1411 CENTRAL AVENUE • DETROIT 9, MICHIGAN

By comparison—
You'll buy **PAR**
REFRIGERATION EQUIPMENT
WRITE FOR CATALOG
Lynch
MANUFACTURING CORPORATION
DEFIANCE, OHIO, U. S. A.

A MASTERPIECE in
OASIS Thirst-quenching Convenience
You're always Sure with an OASIS-built by EBCO, pioneers in the electric water cooler field.
The EBCO Mfg. Co.
401 W. Town St.
Columbus 8, Ohio

AMCOIL'S patented* fin
—the secret of economy in AMCOIL COOLING UNITS
*Pat. No. 2,402,262
AMERICAN COILS CO.
25-27 HUNTINGTON STREET, NEWARK 2, N. J.



INCREASING DISPLAY OF FOODS OPENS UP VAST NEW FIELD

The trend toward greater display of food in stores all over the country is creating a tremendous market for dealers and distributors of Servel condensing units and allied store fixtures.

With more than 800,000 establishments handling perishable and semi-perishable food in the United States (survey by wartime industry advisory committee) and a growing list of new stores opening to serve expanded populations, the prospect for sales in this field is almost unlimited. Nearly every store needs to add or replace one or more display fixtures as soon as possible.

And modern stores demand modern display cases. Thus fixtures for the food trade must have eye appeal—smart, clean-flowing exterior lines. They must be easy to work—eliminate stooping, diving, crawling. They must be well insulated. The glass panes should be sealed to pre-

vent sweating or fogging. And they must have durable exterior and interior finish.

Above all, the refrigeration equipment must be adequate, dependable, and designed for the duty performed. That's one reason you will find leading fixture manufacturers are carefully balancing their heat loads and evaporators with a Servel Supermetic condensing unit to insure maximum satisfaction. High capacity, high efficiency, and exceptional dependability are increasing the demand for Servel units everywhere.

Servel Supermetics cut mechanical service at least 60 per cent by the elimination of belts and shaft seals. And if, after years of service, the owner needs to recondition the system, it can be restored to its original high efficiency by replacing the power unit (motor compressor or assembly) for a nominal cost.

For display cases like the one shown, Servel Supermetic "H" models are especially recommended. Designed specifically for medium temperature applications, they may be set for uniform defrost cycles with pressure control or thermostat. Powerful condenser start-motors insure starting even on low voltage, after short or long power interruptions.

"IT PAYS TO USE SERVEL SUPERMETIC"

★ ★ ★

(BELOW) Display case courtesy of C. Schmidt Manufacturing Company, Cincinnati, Ohio, specialists in quality store fixtures for more than seventy years. The Electric Refrigeration Division of Servel, Inc., manufactures condensing units only. These are available through prominent distributors and fixture manufacturers in all sections of the country.

It's powered by Servel

H2E SERVEL SUPERMETIC. Servel offers nine sizes and types of fractional HP steel case Supermetic units for the perishable food field. The Model H2E illustrated below is widely used on the most popular sizes of display cases.

Electric Refrigeration Division
Evansville 20, Indiana

This is Number One in a series of advertisements featuring the markets available to the alert dealer in the commercial refrigeration industry. Clip this ad or ask for reprints for use in training your salesmen to take full advantage of all commercial refrigeration markets.

ACTIVITIES ON THE DISTRIBUTOR - DEALER FRONT

Appliance Retailers Group Says CPA Priorities Work Injustices In Allocation of Merchandise

WASHINGTON, D. C.—Accusing Federal agencies of hindering business recovery by absurd and confused rulings, the National Electrical Retailers Association joined the nation's building industry in its campaign to eliminate Government controls.

NERA's attitude was outlined by its managing director, Clifford C. Simpson, in testimony given at a recent three-day hearing held here by Senator Tom Stewart's Complaints Sub-Committee of the Special Committee to Study Problems of American Small Business.

Mr. Simpson told the sub-committee the association offered its support in the campaign "because we believe that only through turning

the nation's business back to the nation's business men can the system of free enterprise continue to survive and flourish."

"Our members have further been harassed by the existing CPA Priority regulations.

"When confronted by us with the problem of our members in securing from suppliers such major appliances and installations as complete kitchens, even the Government agency administering the ruling admitted that instead of accomplishing the desired result of getting priority items into the hands of those whom the law intended to protect, the complicated legality of the law was defeating its own purpose.

"Because of variations in the way a dealer might be classified, whether he handed appliances over to a consumer at his store, or, as necessary in the case of complete kitchen and laundry equipment, went out and performed the commonly expected business function of installation, he was favored or discriminated against in the securing of equipment from his distributor.

"This situation of confusion, and failure to reach stated desired ends, has, instead of assisting business, only hindered its recovery. If we are to look forward to a chance to re-establish our prewar standards of business, then we must most certainly be free of the ruinous effects of Government controls."

He asked the sub-committee to add NERA's voice to those of the building industry and allied associations in petitioning the next Congress for "immediate and final relief."

Hot Coffee, Cold Drinks Help Dealer Sell His Refrigerators, Ranges

DENTON, Tex.—When a prospective range or refrigerator customer walks into the Allen Butane Gas Co., appliance dealer, salesmen will serve him either hot coffee off the range, or a cold, refrigerated drink, or salad from the refrigerator—according to whichever interests him.

J. E. Allen, head of the firm, developed this idea simply because he feels that although every prospect "knows what the appliance is for" few of them get any chance to see it actually in use. Therefore, fresh pots of coffee are made five times per day in the Allen showroom and a local delicatessen supplies cold bottled drinks, potato salad, combination salads, cottage cheese, fish, etc., items which are kept properly chilled in the refrigerator.

To date, every customer who has entered the retail showroom has thus either been furnished a hot cup of coffee, or a "snack"—and Allen is convinced that when an ample stock of appliances is on hand, those customers will "think of me first."

Delaying Appliance Sale Aids Rural Customers to Reach Store for Opening

BATAVIA, N. Y.—Max Pies, appliance and furniture dealer with two stores here, tried an unusual experiment in connection with his December price-reduction sale advertised in the *Batavia News*. Although the advertisement appeared on Wednesday, no goods were sold at the special prices until Friday morning.

"This arrangement," said Mr. Pies, "is to give equal opportunity to our thousands of customers who are readers of *The News* and live in the rural areas. Many of them will not get this afternoon's paper until tomorrow morning. If we opened the sale tomorrow, some of the best bargains would be gone by the time that they got to the store.

"As it will be, everyone now gets an equal chance. Hundreds of country people previously have asked us to do this and we know the plan will succeed and doubtless become permanent with us in the future."

... In the EAST

Model Kitchens Emphasized

PROVIDENCE—The Better Home Products Co. has opened its new store in nearby Attleboro and will offer a line of electric refrigerators, laundry equipment, radios, and small appliances.

One of the features of the store is the presentation of a model kitchen arrangement. The store will design or redesign kitchens.

20,000 Sq. Ft. for Appliances

EAST BUFFALO, N. Y.—Maisei Furniture Co., Inc., in business here for 55 years, has opened a new downtown store at 317 Washington St. The store is featuring a complete line of appliances which consume a large part of the 20,000 sq. ft. of floor space in seven stories. John R. McFarlane is manager of the new store.

... In the SOUTH

Stephenson Appliance Expands

RALEIGH, N. C.—The Stephenson Appliance Co., C. H. Stephenson, Jr., manager, finds that its activities have outgrown its store—but, there are no materials available to enlarge. So, the firm has opened at 225 S. Wilmington St. here where the music and appliance departments will occupy 5,500 sq. ft. of floor space available on two floors in addition to a basement.

New Dealer Opens In Rome

ROME, Ga.—Robert F. Dunderville, John R. Newton, and William H. Newton have opened the Rome Electric Co. at 602 E. 2nd Ave. here, with Mr. Dunderville as president and general manager. Lines sold are Kelvinator, Blackstone, Majestic, Westinghouse, G-E, as well as Frigidaire.

... In the MIDWEST

St. Louis Dealer Mortality

ST. LOUIS—Indications that there will be fewer appliance dealers competing in the field than have possibly been anticipated by established dealers, were announcements that 12 new appliance establishments here have closed their doors since Aug. 1.

Four of the 12 dealerships which "folded up" through lack of stock, too heavy drain on capital, etc., had been opened up by ex-servicemen, according to a survey by the St. Louis Better Business Bureau. Most of the stores have been converted to some other form of retailing.

Bing Co. Starts Another

CLEVELAND—The Bing Furniture Co. here has leased a three-story-and-basement building at 282 N. Park Ave., Warren, Ohio, to house another in the chain of its retail outlets in Ohio. The firm already operates furniture and appliance stores in Shelby, Mansfield, and Tiffin, and a store for Coshocton also was recently announced.

... In the WEST

Pair Opens Wyoming Store

CASPER, Wyo.—M. & R. Appliance Co. has been opened for business at 128 S. Walcott St. by Larry Mount and Harry Ritzman, proprietors. The latter will manage the store.

Ransdell Refrigeration Formed

BRAWLEY, Calif.—Ransdell Refrigeration Co. is the firm name under which D. W. Ransdell, F. F. Galpin, and J. M. Fullis have published a certificate that they are conducting business at Brawley.

It's New! THE POSTWAR INLAND SHUCKER TRAY



Available as illustrated, with tray lifter, or without.

Everybody is happy to welcome the new, improved postwar version of Inland's famed Shucker Ice Cube Tray.

Refrigeration makers, jobbers, dealers, and users, see at a glance that it is structurally sturdier in every actuating part—with streamlined beauty to match!

And as always, a demonstration of the Shucker Tray's utter simplicity and super-swift delivery of any quantity of ice cubes, full sized and dry, marks the beginning of a quick and profitable sale. For prices and details write to .

INLAND MANUFACTURING DIVISION
General Motors Corporation, Dayton, Ohio



Model R C 40

40 Cu. ft. capacity

The New Modern ZerO Food Freezer

8" Fiberglass Insulation. Built-In Fast Freezer. Now available with or without compressors. Shipped in sections—crated—easily erected by refrigeration mechanics.

Dealers write for proposition and prices

ZerO Refrigeration Co., Saukville, Wis.

'Triple Threat' Sales-Closing Room Built In Fair Store's Enlarged Appliance Dept.

CHICAGO—An "all purpose" room which doubles in brass as a display room, sales-closing room, and packaged air conditioner display room, is an unusual merchandising asset in the newly remodeled major appliance department of the Fair store here.

The new major appliance department is divided into separate small departments, showing all appliances on glazed black linoleum platforms, over a taupe gray linoleum floor.

Individual Desks Give Salesmen 'Private Office'

ST. LOUIS—A sales-speeding innovation in the design of the new major appliance department at Famous-Barr Co. department store here, is the establishment of individual "sales desks" at the rear of the circular display platform, which in effect, gives every salesman a "private office."

Modernistically designed, each desk consists of a linoleum-topped platform with a triangular enclosure at the left side, which contains eight drawers from floor to desk level, after the manner of a kneehole desk. A panel in front of the tabletop has a white fluorescent daylight lamp, shaded to provide plenty of illumination for writing contracts, prospect cards, etc.

Eight feet wide, the desks are sufficiently large that the salesman can seat two prospects comfortably along the table to write up all details of the sale. A telephone is provided for each salesman, and in the drawers are contracts that cover sales of every appliance carried in the department.

Inasmuch as the desks are in a back aisle, out of the major traffic zone, noise is kept to a minimum, and customers may discuss financing of major appliances in comparative privacy.

The department operates on the "up" system, whereby salesmen are called in rotation from their desks to greet customers.

There are separate departments for ranges, refrigerators, washing machines, partitioned by tiled rails.

Four varieties of automatic washing machines are connected with hot and cold running water, so that it is possible to demonstrate laundering in each.

At the rear of the much-enlarged department is a row of five model kitchens, all done in varied colors, which symbolizes the store's intention to concentrate on complete "packaged kitchens" in the future.

At the end of the row of kitchens is a small 8 x 9 ft. office, completely enclosed. Salesmen are free to use this room which is comfortably furnished with modern overstuffed furniture and a small desk, for closing their sales. They also use it to demonstrate a Raytheon room cooler installed in the window, a radio-phonograph combination, or to telephone prospects.

1,500,000 Unfilled Orders For Oil Heaters Estimate Of Manufacturing Group

NEW YORK CITY—Unfilled orders for flue-connected oil burning space heaters are reported to number nearly 1,500,000, according to the oil division of the Institute of Cooking & Heating Appliance Manufacturers.

It will require an upward revision of manufacturing schedules for vaporizing oil burners, with an accompanying rise in the consumption of fuel oil, according to spokesmen for the industry.

The unfilled orders are broken down as follows: first 1,000,000 new space heaters a year, chiefly for the nearly 20,000,000 dwelling units which have no central heating system and for dwelling units being built, or planned. The other 500,000 to 1,000,000 would be new vaporizing oil burner floor furnaces, circulating warm air furnaces, and water heaters for new homes, farms, and other types of dwellings and commercial and industrial uses.

4-Day Meeting to Launch 'Most Ambitious' Merchandising Program for Gamble-Skogmo

MINNEAPOLIS—Keyed to a new-merchandise mart and featuring an informational program, Gamble-Skogmo, Inc. will sponsor a four-day planning and merchandise meeting in Minneapolis Jan. 27, 28, 29, and 30.

Attending the meeting, the first held since the war, will be members of the traveling field organization, branch store managers, dealers, representatives of store departments, and manufacturers and suppliers. The operations of Gamble-Skogmo, Inc. now extend through 25 states, four Canadian provinces, and Hawaii.

In a letter to the firm's executives, jointly signed by Bert Gamble and Phil Skogmo, the coming meeting is announced as "the most ambitious program we have attempted." Some idea of its proportions may be gained from the meeting place, the Minneapolis Auditorium. Space requirements call for more than 100,000 sq. ft. of display and exhibition space.

The entire first floor will receive special decorative treatment for the sales-show, and the main floor will be the site of the general meetings and special sessions of divisional groups.

The January conference will be the first to combine representatives from all merchandise lines and all selling divisions of the Gamble organization. Through arrangements with manufacturers and suppliers, new merchandise in all featured lines will be introduced. Store buyers attending will be invited to take advantage of the market show in selecting new merchandise and expanding individual store lines.

An informative program and demonstration schedule has been planned for the participants of the meeting. Presentations by key members of the executive staff and special guest speakers will be concerned with result-getting sales methods.



Unretouched photograph taken November 1946 at Boston, Mass.

Each of these BENDIX washers has done 100 years of service

THESE BENDIX AUTOMATIC WASHERS were recently decommissioned after having done more than 320,000 washings in 44 months at the Coast Guard Academy, Groton, Conn., and the Submarine Base, New London, Conn. Each machine averaged between 15,000 and 17,000 washings! And they're still in fine running order!

TRANSLATED into terms of family use—say three washings a week—each of those twenty Bendix washers delivered a century of service in that 44 month period. And you may be sure nobody babied them—they washed everything from dungarees to skivvies . . . efficiently . . . automatically!

WHEN YOU SELL a Bendix, you're selling *proved* dependability in automatic washing. You're offering a machine with a nine-year record of performance, not only in spectacular cases like this one, but—what is just as impressive—in a half-million homes, where the Bendix earned its position as the World's Most Wanted Washer.

BENDIX HOME APPLIANCES, INC., SOUTH BEND, IND.

It's a
REVELATION
—that's all!



- ★ Exclusive Dealer Franchise
- ★ Now in quantity production
- ★ All sizes: Industrial and Commercial
- ★ The last word in . . .

**ELECTRIC
WATER
COOLERS**

Revelation Company
Division of
Interstate Engineering Corporation
2600 Imperial Highway
El Segundo, California

BENDIX
automatic
Home Laundry

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)
United States. His name: Ted Schroeder, who joined Kold-Hold some months ago as a sales representative in southern California.
Ted reached brilliant heights in the finals, all the sports experts agreed, when he teamed up with Jack Kramer to win the important doubles match. The day before, he and Jack had won their singles matches with hardly a ruffle.
Ted, however, now plans to retire from big time tennis competition and concentrate on selling Kold-Hold products. We hope his service on the Coast will be just as hot as it was on the Melbourne courts.

Gazing Into the Crystal Ball

Despite the nation's basically sound economy and the world's unfilled wants for consumer goods,

business and industry enter 1947 facing an uncertain and confused pattern—in sharp contrast with the optimistic forecasts of a year ago. Growing consumer resistance to high prices is a factor to contend with for the first time in several years.

This shaking down in the price structure may be nothing more than a mild readjustment of an overgrown buyers' market. But, failure to halt the wage-price spiral, prolonged strikes for higher pay which throttle production in key industries, and failure to maintain a high rate of man-hour production, may result in a serious business recession before the end of the year.

Price readjustments for 1947 probably will be most noticeable in consumer goods—except for heavy durables, such as home appliances—and less noticeable in industrial raw materials and supplies. These fields, it is predicted, will be bolstered by the requirements of the home building and construction industry—which is not likely to be affected by a recession unless there is a sharp rise in labor and material costs.

Regardless of the form the leveling-off develops—readjustment or recession—any setback will be of short

duration. Once labor-management problems are settled, permitting a steady flow of goods to bring about a balance between demand and supply, the commodity price structure will be firmly established on a high-level plateau for a long period of prosperity.

There is no sound reason why the American economy should not continue at its present high level, and even exceed that height during 1947—if we Americans are willing to get back to work and operate anywhere near as efficiently as we know how.

Every basic index is sound. Yet, there are strong indications of a tendency to talk ourselves into a depression. The uneasiness of prices seems to be a governing factor in our economy at the moment.

If costs and prices rise too sharply, then it can be assumed beyond doubt that there will be a buyers' strike of some magnitude. Sales and business activity might decline sharply.

But, if labor and management alike are wise enough to move forward clearly in the indicated direction, and to hold costs and prices as nearly in line as possible, there is no reason why we should not have a banner year.

Going Out On a Limb

- Here are some predictions:
1. The wage-price spiral will come to an end in 1947 in most fields.
 2. Production generally will continue to increase with a noticeable rise in man-hour production, especially after the readjustment sets in.
 3. Materials and labor will be available in sufficient quantities to permit supply and demand to reach a balance, except in a few basic raw materials.
 4. After a rise in the first quarter of 1947, the price trend for consumer goods will turn downward in most fields.
 5. Before the end of the year consumer resistance to high prices and shoddy material will force a buyers' strike.
- Net conclusion of all these forecasts is that prosperity must depend upon the earnings of the American people, based upon production, and that the time for intensive selling cannot be long delayed. The advertising plans of most manufacturers in our industry indicate a determination to intensify their selling efforts.
- Pressure from management for higher prices and from labor for

higher wages will continue, but consumer resistance will turn the price spiral downward. Eventually, it is hoped, the rank-and-file of Labor will finally decide to give management a chance to elevate their standard of living.
Labor and material will cease being scarce when we all go back to work. A recession will encourage better work, efficiency, lower production costs, lower prices. People will start buying again—and then the recession will be over, and prices will stabilize.

Thought for the New Year

Ever-Ready Refrigeration Co.
218-220 N. Broad St.
Trenton 8, N. J.

Editor:
I have just had occasion to read the enclosed poem in a periodical which I received and I think it is one of the finest poems that I have ever read. I personally believe that it might be very enlightening to those people who are of the opinion that one must have an Anglo-Saxon name, so to speak, before he can be considered a true American.

THOMAS JEFFERSKI
I have a little friend whose name ends with a "ski,"
And yet my little friend looks just like you and me;
Last night I asked my father why a name like that should be,
And this is what my father said as I sat on his knee:
A "ski," a "witz," an "off," or "cu," when added to a name,
Just teaches us the family or country from which it came;
A man like Thomas Jefferson in some lands o'er the sea,
Would not be Thomas Jefferson but Thomas Jefferski;
Or "Jefferwitz" or "Jefferoff" or maybe "Jeffercu"—
So do not let a "ski," and "off," or "witz" seem strange to you;
I feel the same towards ev'ry name no matter how it ends,
For people with the strangest names can be the best of friends.

EDWARD E. GRUSD
It is perfectly permissible for you to publish this little poem if you so desire.

MILTON M. KATZ

Vining's Vocational Advice

The average worker takes 10 years and seven jobs to find his place in the business world, according to Vernon E. Vining, sales consultant for the Westinghouse Appliance business.

"The first job," Mr. Vining avows, "is important only as a testing ground, an opportunity for the employee to show himself what he is capable of doing. A college diploma will not alter this situation," he declares.

"The diploma, itself of no value, gains no particular respect in the working world, but the things learned on the way to that diploma count in the long run."

"Businessmen are looking for young men who have behind them a liberal education that will 'take them any place.' Industry is growing tired of the man who thinks a college education means taking Business Administration and getting a job."

Upon one bit of advice, "Salesman Sam" is adamant: "When going into a job, go in with deep humility; do not sulk and say, 'That's not what I learned at college.' Economics in college is only a pattern. The textbook is a series of theories by which business in general is run, and the study of economics in college teaches one how to learn more quickly the changing economics of life."

Vining goes on to say that the way to get a job is to "ask for it. Never be too proud. No job is too small for the college graduate. One must find something in his work to like, for it is the happy man who is capable of producing, of doing his best."

He continues his how-to-get-a-job advice with a word to the ambitious women of this nation. "The big stores of America offer the best opportunity for college women. There, the competition is not so great and the field is agreeable," he says.

With a few parting reminders about the evil of "office gossip" and the necessity of never being afraid to offer suggestions, once the initial period of humility is over, Brother "Sam" Vining closes his informal and informative essay on getting-a-job leaving the students with much to think over (and much straightened out in their minds) concerning the problem of getting started in the business world.

WANTED NOW Empty "Freon" Cylinders

Users of "Freon" Safe Refrigerants are urgently requested to check all "Freon" cylinders on hand and to return empty cylinders at once—today, if possible!

Empties are badly needed to meet the greatly increased demand for "Freon."

Shortage of cylinders in

which to ship "Freon" has resulted from reduced deliveries of new cylinders . . . due to scarcity of raw materials, chiefly steel. One way to bridge the emergency . . . continue meeting the tremendous demand for "Freon" . . . is to utilize every available "Freon" cylinder. So won't you please check

all cylinders you have on hand and return the empties NOW.



➡ This handy memo may help you expedite matters... please relay it to the proper person or department. ⬅

(TEAR FROM CENTER AND ALONG THIS LINE)

URGENT MEMO

To: _____

The "Freon" people have asked us to help meet a very serious shortage of cylinders. Please check all cylinders we have on hand and arrange to return empty "Freon" cylinders immediately.

Ship empty "Freon" cylinders via freight collect to:—
Kinetic Chemicals, Inc.
Carney's Point, New Jersey

11-Story Wichita Hotel to Have One of Midwest's Largest Air Cooling Systems

WICHITA, Kan. — One of the largest hotel air conditioning installations in the middle west, and one of the first conduit systems in that area, is being placed in the 11-story Hotel Lassen, Wichita, by Carrier Corp.

A total of 260 Conduit Weather-masters units are being installed, permitting the occupant of a room to regulate the temperature and humidity to suit his individual taste. Each room outlet is served by a small pipe from a central air conditioning system, eliminating the space-consuming large ducts formerly required. Sixty-four of the Weather-master units are used to control temperature and humidity in the Wichita Club, which occupies space on the two top floors of the hotel.

Serving the room units is a Carrier 17M41-5-5 centrifugal refrigerating machine of 210 tons capacity. The machine is driven by a steam turbine, since steam is readily available in summer for the boiler used to operate the hotel. The automatic control system consists of an

outside compensating recording controller which regulates the temperature of the water to the three zones served by the installation.

The decision to add room-controlled air conditioning to the hotel's services was made to keep abreast of competitive developments, according to Walter Schimmel, manager.

"The experience of many leading hotels has shown that air conditioning provides a degree of luxurious comfort increasingly demanded by the traveling public," he said. "The Hotel Lassen feels that Carrier air conditioning will provide our guests with maximum comfort for many years. We look upon air conditioning to give us a competitive advantage when conditions are more normal, and the hotel which offers the best service will be the most successful."

The Hotel Lassen is one of a chain of four hotels under the direction of the Schimmel brothers: Walter in Wichita, Edward in Omaha, A. Q. in Lincoln, and Bernard in Galesburg.

Wayne Wants to Head New Orleans Assn.

NEW ORLEANS — Wayne B. Wands is the new president of the Electrical Association of New Orleans. He succeeds Carl O. Brown, who was named to the executive committee.

Also elected were: S. L. Drumm, executive vice president; Harry B. Lackey, vice president, representing wholesalers, utilities, and manufacturers; C. C. Walther, vice president, refrigeration; Walter J. Barnes, vice president, electrical contractors; J. O. Crary, vice president, air conditioning and ventilation; A. C. Denny, vice president, radio; W. E. Clement, director of publicity; J. R. Guidroz, secretary, and I. W. Tufts, treasurer.

Others serving on the executive committee, besides Mr. Brown, include C. W. Nussbaum, C. G. Staubitz, Glenn Wilson, E. N. Avogno, A. B. Lindauer, A. Bruce Hay, B. P. Bain, and Fred B. Hartney.

In his report as retiring president, Mr. Brown pointed to a membership of 171, an increase of 26.

New Carrier Corp. District Sales Managers Are Named by O. W. Bynum

SYRACUSE, N. Y.—Appointment of new district managers in the direct sales division of Carrier Corp. has been announced by O. W. Bynum, manager of direct sales.

W. S. Bodinus has been made Chicago district manager; J. H. Bailey, Cleveland district manager; and W. H. Steitler, Dallas district manager.

Assignment of Walter F. Jones as centrifugal gas compressor specialist of the corporation has also been announced. Mr. Jones will make his headquarters in New York City.

International Detrola Sales Up Over 1945

DETROIT—Sales of International Detrola Corp. and subsidiaries aggregated \$40,981,473 in the 12 months ended Oct. 31, 1946, compared to \$36,244,179 in the fiscal year 1945. C. Russell Feldmann, president and board chairman, has announced. Sales for November were \$5,597,843.

The Detrola board of directors took no action on the customary November dividend on which a decision had been deferred last month, Mr. Feldmann said. The company paid a total of 75 cents per share on 1,200,000 shares outstanding.

"The dividend for the first quarter of this fiscal year, which began Nov. 1, will be considered when the results of operations for that period are more clearly defined," he added.

With Presteline



PAUL H. ECKSTEIN

M-H Leases Building For Research, Schools

MINNEAPOLIS — Minneapolis-Honeywell Regulator Co. here has announced the leasing of a two-story building in this city for the use of the firm's research department and sales school.

The new building will give these two departments 50% more space and release areas in the main plant to allow for the expansion of production facilities, the management pointed out. The building is located only three blocks from the main plant.

Eckstein In Presteline Post; New Products To Show at Mart

CHICAGO—Appointment of Paul H. Eckstein as assistant general manager of the domestic appliance division of the Prestel Steel Car Co. here has been announced by A. Rayson, general sales manager.

Mr. Eckstein was sales promotion manager for the Stewart-Warner Corp. before the war. He also has been a district sales manager in the southeastern states for that firm. He had held sales and advertising positions in the electrical appliance industry for the past 20 years.

Mr. Eckstein will be at the Presteline showroom in the Chicago Furniture Mart during the January market to meet Presteline distributors and dealers, according to the company. Prestel Steel Car will give its distributors and dealers a preview of two new major appliance products.

UEW Local Beats Alleged Red-Tolerating Officers

BRIDGEPORT, Conn.—Incumbent officers of Local 203 (General Electric Co.), United Electrical Workers, CIO, accused of tolerating Communist activities within the local, were defeated decisively in the annual election of officers held recently.

Michael Berescik, incoming president, received 2,662 votes to 1,497 for outgoing Oliver Arsenault. Joseph Julianelle was elected business agent.

Iserman Will Manage Cincinnati G-E Branch

CINCINNATI—L. A. Iserman has been appointed manager of the Cincinnati branch of General Electric Appliances, Inc., it has been announced by P. A. Tilley, president of the corporation. He succeeds P. C. Wilmore, who has resigned.

Since his discharge from the Army Air Forces last year, Mr. Iserman has been sales manager of the Cincinnati branch.

Mr. Iserman got into the electrical appliance business in 1928 as city dealer manager for R. Cooper, Jr., Chicago distributor. He later moved to Portland, Ore., with the Laidley Co., and then in 1932 transferred to the General Electric Supply Corp. in that city.

Three years later, he became Des Moines branch manager for General Electric Supply; and in 1936 he was appointed appliance sales manager for the same company in New York City.

Measuring muscle by electronics



Frank Kanera
J & H Associate, Plant No. 7

Extra values through
JACK & HEINTZ

Mass Precision

The usual way to measure the torque of electric motors is to use an apparatus of wheels, brakes and weighing scales. This method was too slow and cumbersome for the new Jack & Heintz Fractional Horsepower Motor Plant.

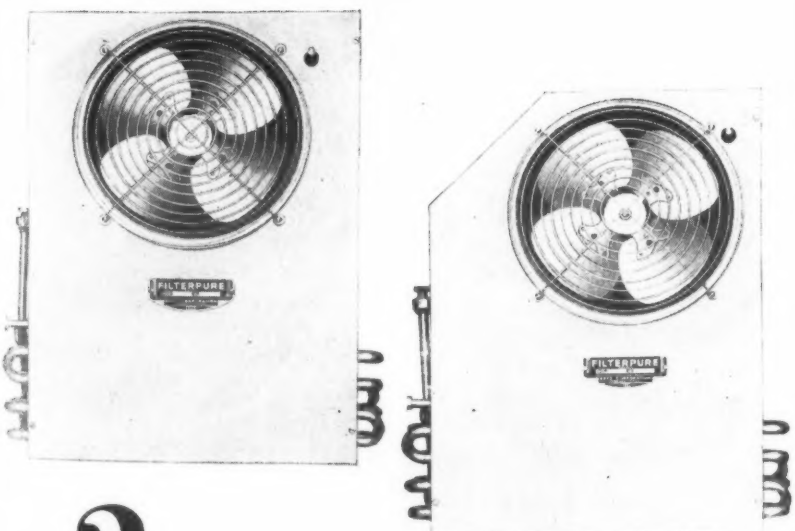
So Jack & Heintz Production Engineers developed an ingenious electronic dynamometer which measures motor torques in a few seconds with unheard-of precision. An operator simply plugs in the motor and reads the torque on a dial. This helps speed up the production of Jack & Heintz motors for urgently needed appliances.

This is typical of the achievements of Jack & Heintz mass precision which are producing extra values in motors, refrigeration compressors, aircraft accessories, Eisemann magnetos and bearings today, and which promise startling developments for tomorrow.

JACK & HEINTZ PRECISION INDUSTRIES, INC., Cleveland 1, Ohio

Filterpure

FOR DRY BEVERAGE BOXES



2 MODELS

-- for installation in extreme end of the fixture
-- or for installation on center of rear wall

3 SIZES

-- to balance 1/4 - 1/3 - 1/2 HP compressor.

Sold by Leading Refrigeration Wholesalers

BETZ CORPORATION
HAMMOND, INDIANA

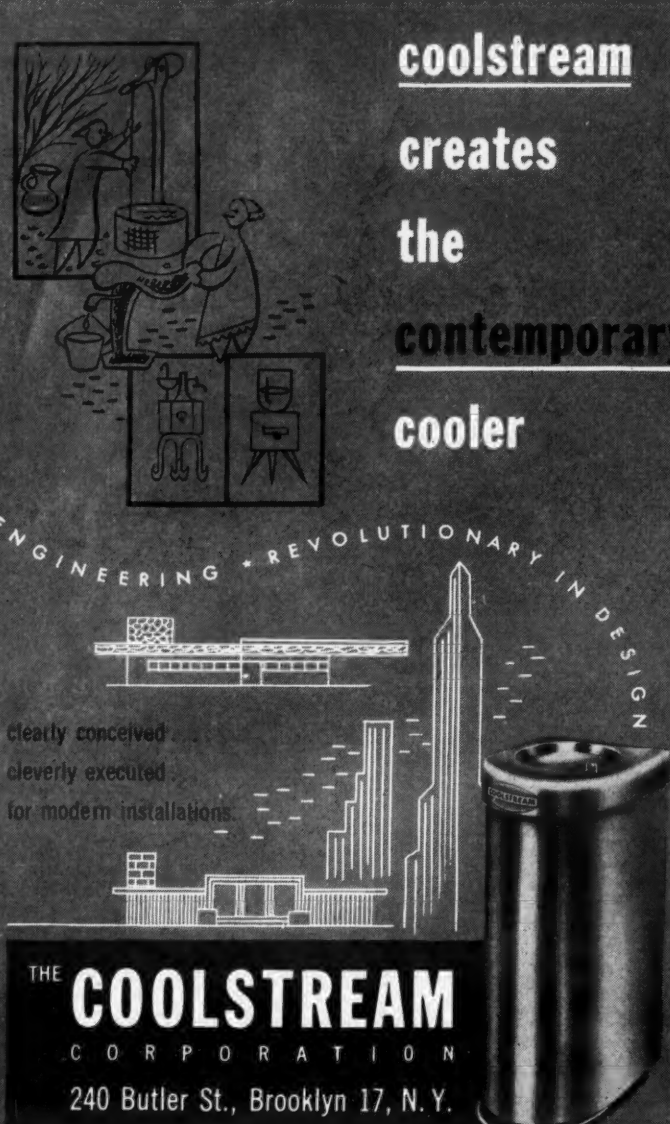
coolstream
creates
the
contemporary
cooler

EVOLUTIONARY IN ENGINEERING • REVOLUTIONARY IN DESIGN

clearly conceived
cleverly executed
for modern installations.

ask your distributor to show you the new coolstream electric water coolers.

THE COOLSTREAM CORPORATION
240 Butler St., Brooklyn 17, N. Y.



Specify CHICAGO
SHAFT SEALS VALVE PLATES



With
Self-Adjusting
Sleeve Lock.



Only Chicago valve
plates have replace-
able seats.

CHICAGO SEAL CO.
20 NORTH WACKER DRIVE • CHICAGO 4, ILL.

Dealer's Advertisement Pledges Low Prices; Letter to Suppliers Asks Fair Deal In Return

Action Inspired by Letter from Maytag

MORAVIA, N. Y.—Feeling very strongly that the best policy for an appliance dealer, or any other merchant, to follow, is to strive to keep prices down, Kilborne Bros., farm implement and appliance store here recently inserted a full-page advertisement in the local newspaper to tell its customers about it.

The advertisement which they published is presented along with this article.

Kilborne Bros. implemented the newspaper's circulation by sending copies to its customers not on the paper's subscription list.

Fred W. Kilborne, of the firm, said that he was inspired to run the advertisement by a letter he received from Fred Maytag II, which was addressed to all Maytag dealers. This letter, according to Mr. Kilborne, expressed his views completely.

The letter warned that any Maytag dealer who charged above recommended retail prices would be relieved of his Maytag contract.

Mr. Kilborne also sent copies of the advertisements to his suppliers, pointing out that he could not advertise these statements unless they were true. He reminded his suppliers that by following a fair course with his customers, he had kept the supplier's product in excellent standing in his community.

We feel that knowing this is true, you, as our supplier might bend over backwards to see that we get as large a share of your limited production as you could possibly give us.

"All we ask in return," he said, "is that, during the next one or two or three years of curtailed production, you give us all the merchandise that you possibly can."

"Have you as a supplier to dealers been just as fair to your old line dealers who have always carried the ball for you, or are you taking this opportunity to build up new territories in which you were not successful when goods were plentiful?" Mr. Kilborne asked.

Farm Implement Weekly KILBORNE BROS., Editors

The PAST & the FUTURE

Now that the O. P. A. is only a memory, we wish to state again that we believed it to have been a necessary evil during the war and for a short time after. If we hadn't had any price control, we would today probably be paying Frank Robbins \$50.00 for a haircut and Dutch Close \$1200.00 for a pair of pants. Of course, we'd be getting \$400.00 a bushel for wheat, but still, none of us would be as well off in terms of actual purchasing power.

Feeling that we were only doing our fair share, during the 4½ years in which O. P. A. was in existence, we never sold a plow joint, a tractor tire, a side rake, a tractor, a refrigerator, a new or used machine of any description, an hour of labor, or any article of merchandise at a price above ceiling. Nor did we ever insist that any man or woman buy a \$10.00 drawbar for \$800.00 in order to buy the tractor it fitted on for ceiling price. Nor did we indulge in any type of subterfuge such as the above in any deal.

Witness to the above are any of the many, many, hundreds of farmers who dealt with us during that period. Even Judge Hall would have to agree.

In the above practice, we were joined by the majority (sorry to say not all) of the merchants in the United States. For this reason, although we have inflation to a degree, it has not reached the proportions of a catastrophe, and, with production steadily increasing, the danger is lessening every day.

So much for the past—what about the future?

There are still shortages in many lines of merchandise, and ours is one of those lines. This situation may exist for six months, a year, or two years. During this time, unscrupulous dealers can easily sell what machines they get at two or three times their normal pre-war or wartime profit. This would now, of course, be perfectly legal since O. P. A. has finally been abolished.

Our pledge to you, our customers, is that, unless publicly stated otherwise, we will not charge any greater margin of profit than we have always had in the past, on any repair part, any machine, any tractor, any truck, or any article of merchandise.

If everyone will do this, the danger of any runaway inflation during the next few months is absolutely nil.

This doesn't mean that there will be no minor price raises. Believe it or not, several manufacturers are operating at a loss due to the greatly increased cost of labor or materials. This will necessitate a few price increases, and farm machinery will undoubtedly be one of them. Farm machine prices are only up about 10% from pre-war days and we all know that it will be impossible to hold them quite at that level. International Harvester, at a recent dealers' meeting, promised us they would keep this increase to a minimum.

Let's all work together for the next few months to keep prices down—if we do, we will be amply repaid over a great many years.

This month's election repudiated the New Dealers who want the government to control EVERYTHING. For heaven's sakes—let's not prove them right.

JEFF and FRED

The above policy also applies to—

GEORGE H. LEONARD, Inc.

Casey Heads Jack & Heintz Public Relations Dept.

CLEVELAND — Ray Legg, vice president of Jack & Heintz Precision Industries, Inc., has announced that John T. Casey of New York City has been appointed director of public relations for that organization.

Since completing duty with the Navy last February, Mr. Casey has been with the public relations firm of Ivy Lee and T. J. Ross, Inc. of New York City. Mr. Casey was on active duty with the Navy for five years and served both afloat and ashore. He completed his tour of duty with the rank of commander.

Before the war, Mr. Casey directed his own public relations organization in New York City. A former Washington correspondent, he began newspaper work in his home city of Lynn, Mass. He has served in editorial capacities in both Lynn and New York City newspapers and for 10 years wrote the syndicated column "Casey at the Bat."

Mr. Casey has directed several network programs, including the Lou Little and the Chick Meehan football shows. He is the author of numerous magazine articles, as well as the biography of James A. Farley.

Anderson's Home Appliances To Operate In Cheyenne, Wyo.

CHEYENNE, Wyo.—Mr. and Mrs. R. C. (Hap) Anderson have purchased the Reenan Appliance store at 316 West 16th St. and will operate at the same location under the name of Anderson's Home Appliances.

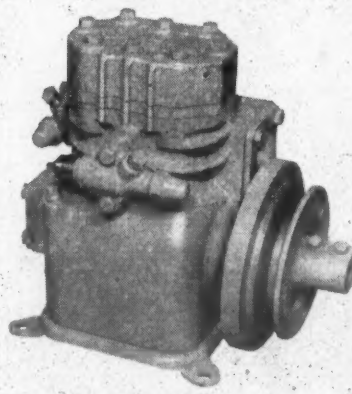
Earl Anna, formerly employed at Ft. Warren as refrigeration plant operator, has been retained as refrigeration technician. He is a graduate of Industrial Training Institute, Chicago.

Royal Master Appliance Leases Ordnance Plant

TOLEDO—Lease on 50,000 sq. ft. of the Scioto ordnance plant, located near Marion has been signed by the Royal Master Appliance Co. of Detroit, officials announced here.

The concern, using two large buildings and several smaller offices said it will make electrical appliances.

DOVER Model - 151 High Speed compressor



LEADING MANUFACTURERS and JOBBERS

are fast lining up with the DOVER compressor. YOU TOO can share in part of our 1947 production. Write or wire for details about this rugged—compact—dynamically balanced compressor.

DOUGLAS EQUIPMENT CORP.
Direct factory sales
74 Colden Street, Newark 4, N.J.

DOVER equipped condensing units available
½ H.P. Less motors.

condensing units

½ H.P. AIRFLOW Condensing Unit, twin-cylinder, 580 RPM, 4020 B.T.U. at 20 degrees suction and 90 degrees ambient temperature. With back-pressure control, flywheel and fan belts. Less motor.

PRICE
\$88.00

in lots of 6 or more.
F.O.B. N.Y.C.

BOX 2187, AIR CONDITIONING & REFRIGERATION NEWS

Also Available: NEW ALL-STEEL SECTIONAL WALK-IN COOLERS.
Write for Specifications and Prices.

Now! ORDER MONDAY — GET FRIDAY HANDEES (WHO HAVE SOLD OVER 10,000 TRUCKS BY MAIL) OFFER A NEW Dual Wheel Refrigerator & Appliance TRUCK

Also for Furniture, Crates, Boxes, Cartons

HIS new dual wheel truck rolls as easy as a baby buggy. The 4 big resilient rubber tires contact floor at 4 points, giving truck a firm base, making heavy objects easier to load, easier to roll, easier to handle. No strain on arms of operator because (due to the 4 large wheels) there is no tendency to side-pull, side-tip, nor will it "slew" around when some small obstacle is run into on the floor.

Try at our risk. You will find HANDEES dual wheel truck will greatly reduce the job of handling heavy appliances and bags, and cases, cartons as well. Over 10,000 HANDEES trucks have been sold by mail. Less than a dozen of them have come back on our simple guarantee. "Send back any HANDEES truck collect if it doesn't fit your needs." Order by mail with full confidence of satisfaction or your money back.

Specifications: Model 88R 1" O. D. tubular steel frame. Ht. 54"; nose width 24"; 13' web strap; curved cross pieces. Wheels: four 8 x 2 unusually resilient durable rubber. Cap. 1000 lbs.

\$31.95

HANDEES CO. Dept. AC1
Bloomington, Illinois



Another
New
Handees
Dual
Wheel
Truck

Joins Staff of McCombs Refrigeration Supply



R. L. HOUGHTON

Secretary of the Mile High chapter of the Refrigeration Service Engineers Society in Denver, he recently joined McCombs Refrigeration Supply Co. Mr. Houghton was formerly associated with Western Appliance Co. in Denver, and Kelvinator distributors in St. Louis and Kansas City.

Engineering Specialty Co.

Grants Employee Bonus, Revises Insurance Setup

GARY, Ind.—Payment of a general salary bonus amounting to approximately one week's pay for full time employees and inauguration of a new management-employee insurance program marked the annual Christmas party given for the 22 employees of Engineering Specialty Co., Inc., E. M. Kirtland, president, has announced.

The management of the air conditioning and refrigeration parts wholesaling firm will contribute 40% of the cost of the insurance and the employees will pay 60%.

"The party was a great success. These things are definitely an aid in promoting employee-management relations," he said.

Schwartz Celebrates New Store with Open House

NEW YORK CITY—Sam Schwartz, refrigeration supplies and parts wholesaler here, celebrated the opening of his new and larger store at 2071 Webster Ave. in the Bronx with an open house party recently.

WE MANUFACTURE

MODERN FREEZERS & ICE-CREAM CABINETS

Can Allocate 380

Complete Cabinets Monthly On Contract Basis.

Box 2183, Air Conditioning & Refrigeration News

PROMPT SHIPMENT

- New 1/4 H.P. Motors
- Reach-Ins 25-40-60-80 Cu. Ft.
- Ice-Cream Cabinets
- Beverage Coolers—Remote—Self-Contained
- Electric Water Coolers
- Freezers 6 to 75 Cu. Ft.
- Clearview-Slide Tops
- Reach-In Type Freezers
- Home-Farm Freezers
- Blower Coils (Pat. Pend.)
- Freezer Plates (Pat. Pend.)
- Condensing Units
- 1/2 H.P. to 3 H.P.
- Two Temp. Equipment
- Walk-In Coolers
- Electric Meat Slicers
- Electric Meat Saws
- Electric Meat Choppers

ACECO

903 Temple St.
Los Angeles 12, Calif.

L. C. Keely, Potter Head Chicago Wholesalers Group

CHICAGO—The Central Refrigeration Wholesalers Association here has elected the following officers for the coming year:

L. C. Keely of Airo Supply Co., chairman; Dick Potter of U. S. Electric Supply Co., vice chairman; Irving Alter of Harry Alter Co., treasurer; and Pat Ravanese of Service Parts Co., secretary.

All of the firms represented are located in Chicago except U. S. Electric, which is in Springfield, Ill.

Jack P. Glass is the retiring chairman of the organization.

Mueller Brass Co. Announces 40 Cent Stockholder Dividend

PORT HURON, Mich.—The Mueller Brass Co. here announced a 40 cent dividend which was payable Dec. 27, 1946, to stockholders on record as of Dec. 13.

Harvester Reports on Production Progress At Evansville Factory

CHICAGO—Report of International Harvester's progress in the refrigeration field was made here last month to 160 members of the National Home Demonstration Agents' Association, and other guests, by Herold N. Ross, product specialist for refrigeration.

The Association is an organization of home economists who bring technical and other information about better living to rural homes and families.

Mr. Ross opened his remarks by recalling a statement made by E. F. Schneider, general manager of Harvester's Refrigeration Division, at the 1945 annual breakfast meeting of the group. Mr. Schneider then said, "We have refrigeration plans but no plant."

"Since then," Mr. Ross continued, "International Harvester has equipped and tooled the huge war-produc-

tion plant built by the government at Evansville, Ind., for the Republic Aircraft Co. Today that plant is a modern refrigeration factory.

"Already we have obtained some production of the first unit in our refrigeration line, the 11-cu. ft. International Harvester freezer. Soon we expect quantity production. And as quickly thereafter as adequate supplies of parts and materials are available, larger and smaller sizes of freezers, and conventional and two-temperature refrigerators, will go into production."

Shown in connection with Mr. Ross' address was a freezer, set against a large cut-out display for store selling-centers and window displays.

Pair Starts King-Holmes Appliance Service on Coast

VAN NUYS, Calif.—King-Holmes Appliance Service is the firm name under which Elvin H. King and Walter C. Holmes have published a certificate that they are conducting business at 14508 Delano St.

Earnings

Frick Income: \$970,732

WAYNESBORO, Pa.—Frick Co. reports a net income of \$970,732 for the year ending Oct. 31, compared to \$682,188 for the preceding fiscal year.

McCord Profit: \$483,852

DETROIT—McCord Corp. reports a net profit of \$483,852 for the quarter ending Nov. 30, contrasted with \$15,481 for the same period in 1945.

A. C. McCord, president, pointed out that the significant difference was due to the fact that the period in 1945 was one of heavy expenses, resulting from the change-over to peacetime production.

E-W Profit: \$179,887

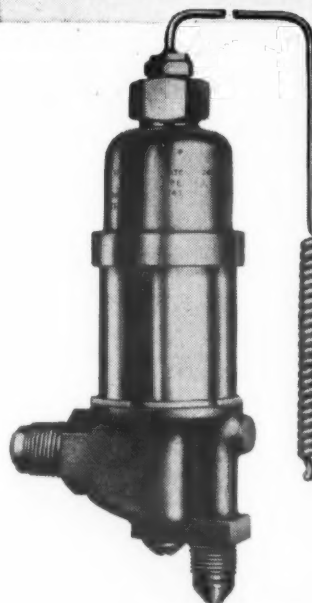
BLOOMINGTON, Ill.—Eureka Williams Corp. has reported a net profit of \$179,887 for the quarter ending Oct. 31.



"DETROIT" HALLMARK OF THE BEST In Thermostatic Expansion Valves

This trademark on a thermostatic expansion valve indicates that it is top quality—a valve that you can be sure will give superior performance over a long period. "Detroit" Valves have

been the standby of refrigeration men everywhere for many years. Easy to install—easy to adjust. Try these valves on your next suitable job.



NO. 673—"THE STANDARD OF THE REFRIGERATION INDUSTRY"

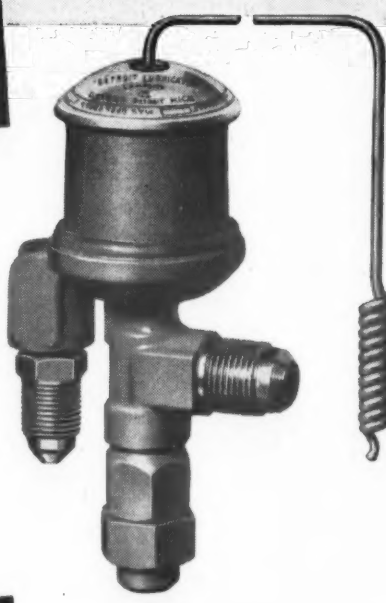
"Detroit" No. 673 has a long record of dependable performance in a wide variety of installations, and has been, for many years, "the standard of the refrigeration industry". Designed for average size commercial and air conditioning installations. Sensitive and accurate in operation—gas charged for instant response and reduction of motor load during pull-down cycle. Duraflex bellows and Delubaloy needles and seats resist corrosion and assure long life.

UNIT NUMBERS OF NO. 673 VALVE

Stock Items with Your "Detroit" Wholesaler Use "Detroit" Unit Numbers when Ordering

Unit No.	Refrigerant	Max. Pressure	Connection
6731968	Freon-12	15	Inlet 3/8" SAE for 3/8" x 1/4" reducing nut. Outlet 1/2" SAE
6731428	Freon-12	55	
6731563	Methyl	10	
6731411	Methyl	40	

Rated at 1 ton Freon-12 or 2 ton Methyl



No. 573—THE SAME SUPERIOR PERFORMANCE AS THE NO. 673 FOR SMALLER INSTALLATIONS

This valve, in 1/2 ton (Freon-12) capacity, has the quality and operating characteristics of No. 673. Designed for small commercial installations, its double diaphragm gas charged power element permits close superheat control at low suction pressures and provides motor overload protection in its simplest, most effective form, using only one power element.

UNIT NUMBERS OF NO. 573 VALVE

Stock Items with Your "Detroit" Wholesaler Use "Detroit" Unit Numbers when Ordering

Unit No.	Refrigerant	Max. Pressure	Connection
57300	Freon-12	45	Inlet 3/8" SAE for 3/8" x 1/4" reducing nut. Outlet 1/2" SAE for 1/2" x 3/8" reducing nut
57309	Freon-12	10	
57311	Methyl	35	
57315	Methyl	5	

Rated at 1/2 ton Freon-12 or .9 ton Methyl

DETROIT LUBRICATOR COMPANY



General Offices: 5900 TRUMBULL AVENUE, DETROIT 8, MICHIGAN

Division of AMERICAN RADIATOR & STANDARD SANITARY CORPORATION

Canadian Representatives: RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG

"Detroit" Heating and Refrigeration Controls • Engine Safety Controls • Safety Float Valves and Oil Burner Accessories • "Detroit" Expansion Valves and Refrigeration Accessories • Stationary and Locomotive Lubricators

They'll Do It Every Time By Jimmy Hatlo



Out With Special Privileges -- Revise the Wagner Act!

PALEY ENGINEERED REFRIGERATION • PALEY ENGINEERED REFRIGERATION • PALEY ENGINEERED

For greater Display! ...for greater Profits!

Accessible frozen foods sell themselves
from these Engineered Cabinets by *Paley*



*OPEN FOR BUSINESS... no groping, because selection is convenient—always at the sales level for more sales, greater profits. Special Kold-Hold evaporator and 6-inch insulation reduce operating costs by permitting use of a smaller condensing unit—yet maximum refrigeration efficiency is maintained throughout the cabinet.

*For detailed specifications, write today for your free copy of "THE LID IS OFF!"

*SALES ON BOTH SIDES... Paley's new aisle type open top cabinet serves twice as many customers at once. Utilize dead floor space, capitalize on aisle traffic to double frozen foods sales from every cabinet. Solid construction within, shining clean beauty without.



Look for this Paley mark of Engineered Refrigeration on the cabinets you buy!

SOME TERRITORIES STILL OPEN FOR DISTRIBUTORS

PALEY MANUFACTURING CORPORATION • 244 HERKIMER ST., BROOKLYN 16, N.Y.

PALEY ENGINEERED REFRIGERATION • PALEY ENGINEERED REFRIGERATION • PALEY ENGINEERED

AN INTERNATIONAL INSTITUTION • SUBSCRIBERS ALL OVER THE WORLD

Trade Mark
registered
U. S. Patent
Office:
Est. 1926



AIR CONDITIONING AND
REFRIGERATION *News*

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F. M. COCKRELL, Founder

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VOLUME 50, No. 1, SERIAL NO. 929, JANUARY 6, 1947

Be Proud of Your Job As a Distributor of Specialty Merchandise

CURRENTLY, it is fashionable to wail about the cost of distribution. Most of the self-appointed big-brains of the left-wing intelligentsia tell us that Distribution costs too much—even though the truth is that it doesn't cost enough!

Our distributive system, which is actually the most efficient in the world, is one of the current objects of attack on the part of communist-led publicists whose articles are published in America's "serious" magazines.

These critics decry the large number of outlets in any distribution system—ignoring the fact that consumers demand what they want when they want it within easy purchasing distance.

They say there are too many brands—but they forget that there are only as many brands as customers make it profitable for suppliers to manufacture.

They say that our distribution system fosters too much variety—but they forget that variety and individualism are the very foundation stones of the American Way.

They say that our System is burdened with the cost of too much competitive advertising—but they forget that advertising, by increasing desire, has made possible mass production with its attendant lower costs and wider use of needed products.

These critics forget, too, that normal competition takes care of most excess costs.

There are four reasons why "distribution" doesn't cost enough:

- (1) Normal competition often forces distributive margins down to a point which is obviously dangerous to business survival.
- (2) A major responsibility for increased employment must come substantially from the distributive industries.
- (3) Labor costs within the distribution system, as in every other segment of our economic life, are tending upward.
- (4) The American people must advance their standard of living; and this advance *must* be inspired by aggressive promotion and advertising on the part of our distribution system.

If the American people are to improve their standard of living at a precipitate rate—thus providing more jobs, more money, and more happiness for all—then it must be agreed that distribution isn't now charging enough for its services.

Distribution costs are *too low* if we would provide full employment, subsidize rising wage rates, safeguard against business failures, and preserve the American Way of Life.

Sell more, and production will follow. Sell less, and factories will close.

That's the simple truth which too many doubting American voters must be sold upon. Putting that Truth across will not be an easy job, but it must be done.

Here are a few suggestions: Urge key business papers, magazines, newspapers, and radio broadcasters to explain how our distribution system works and why present distribution costs are low; spur national advertisers to explain how their work contributes to larger payrolls and prosperity; establish more adequate research so that a free flow of data regarding the merits of our distribution system can pour in to all who wish to cooperate in this necessary campaign.

Distributors shouldn't remain on the defensive. They have a wonderful story to tell, and they should *shout* it.

On your next service call...
put on
ⓂⓅ "TRAP-DRI" first!

You'll avoid expensive call-backs later!



TRAP-DRI

DRIER - FILTER - STRAINER

- ✓ Traps all impurities in your system.
- ✓ As effective as a 900-mesh strainer — yet offers no appreciable pressure drop.
- ✓ Silica Gel takes up to 12 to 16 per cent of its weight—more than other drying agents.
- ✓ Acts instantly — not affected by oil in system — give up no dust or powder.
- ✓ Three sizes — $\frac{1}{8}$, $\frac{1}{2}$, and 1 ton.
- ✓ May be used with Freon, Methyl, Sulphur.



This A-P "TRAP-DRI" Drier-Filter-Strainer ahead of your expansion valve is a great service time-saver on any system! You get smoother, trouble-free valve operation, prevent freeze-ups, clean up your refrigerant line in a jiffy!

Once on the line, a "TRAP-DRI" starts immediately cleaning out all gummy deposits, scale, dirt, and solder particles. And Moisture or acids in the system are quickly absorbed by the efficient charge of Silica Gel. Gives you "100% protection" against system impurities.

Make the A-P "TRAP-DRI" system-protector a *must* on every job. It saves trouble, time, money later.

Stocked by leading refrigeration parts jobbers. For details, write for bulletin No. 107.

why every system needs "TRAP-DRI"

This heavy deposit of impurities was taken out of a new system by an A-P "Trap-it" (similar to "Trap-Dri" but without Silica Gel).



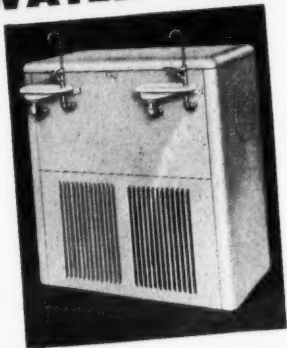
AUTOMATIC PRODUCTS COMPANY

222 NORTH THIRTY-SECOND STREET • MILWAUKEE 10, WISCONSIN
EXPORT DEPT. • 13 E. 40TH ST., • NEW YORK 16, N. Y.

Dependable

IVES

CABINET DRINKING WATER COOLERS



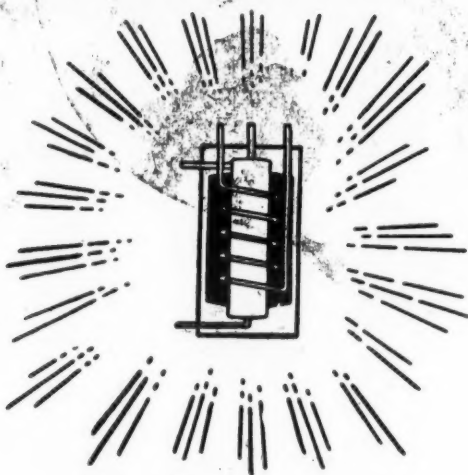
Glass filler or bubbler coolers are available with capacities up to 25 gallons per hour. Cabinet of heavy steel welded construction with white baked enamel surface. Also available now — normal and high suction pressure water coolers for commercial use.

Write for latest data.

DAY & NIGHT
REFRIGERATION
DIVISION
DAY & NIGHT MFG. CO.
One of the Dresser Industries
MONROVIA, CALIFORNIA
SOLD THROUGH REFRIGERATION
WHOLESALE AND DEALERS

THERMOBANK

automatic



defrosting

Means:

LOWER TEMPERATURES
HIGHER EFFICIENCY
HIGHER HUMIDITY
ATTENTION-FREE OPERATION

With the Thermobank, temperatures of 32° F. to -40° F. and below can be maintained as easily and with the same freedom from frost as temperatures of 40° F. in a conventional system. Operating with practically frost-free coils, Thermobank maintains the desired low temperatures with higher back pressures, less temperature differential between air and coils; and consequently higher humidity, less drying and more efficient compressor operation.

Essentially, the Thermobank System of Automatic Defrosting consists of a forced convection cooling unit, automatic time controls and a heat reservoir. A portion of the heat extracted during the refrigeration cycle is banked in the reservoir from which it is released to the refrigerant during the defrost cycle.

Send for Booklet 16-N explaining Thermobank System and including useful low temperature information and time-saving rapid selection tables.

KRAMER TRENTON CO.

HEAT TRANSFER PRODUCTS

TRENTON 5 • NEW JERSEY

What's New

'Dishmatic' Cleans 95 Pieces In 30 Minutes

JACKSON, Mich.—"The only dishwasher that heats its own water."

Such is the claim made by Lake State Products, Inc., here for its new electric unit, the Dishmatic. The machine is said to automatically wash, rinse, and dry as many as 95 pieces, including dishes, glassware, silver, pots, and pans, in one 30-minute operation.

According to the manufacturer, the only effort required by the user is to stack the dirty articles in the "ample" racks ("no pre-rinsing needed"), add washing compound, close the lid, and turn the switch.

A few seconds after the Dishmatic is turned on, the company explains, hot water begins to enter the tub to start the washing period. During this period, scalding water is driven at high speed by an impeller over the articles while they are kept stationary in the racks. The dirty water then drains off and clean hot water floods in for rinsing.

Immediately after the rinse period, the automatic latch permits the lid to open partially and the impeller



The Dishmatic

circulates hot steam over the articles. The firm claims the heat stored up in the dishwasher and the dishes, with the aid of the impeller, dries the dishes thoroughly before the unit shuts itself off.

The water pressure is so great and the temperature so high that the unit automatically cleans itself.

A visible indicator switch is said to show what the machine is doing at any given moment.

Designed to fit into a small space, the Dishmatic is 24 in. square and 36 in. high. The baked enamel cabinet has a porcelain top.

An announcement from the concern said that installation sketches for plumbers are not yet available but that "any plumber can install this machine by using a P, S, or drum trap." It suggests the use of a flexible copper tubing supply line from the unit to the solid plumbing connections and that the connection be made to a soft water outlet if possible.

When the Dishmatic first went on sale at Gimbel's in New York City, it was priced at \$224.

"RECO-FAB"

WALK-IN REFRIGERATORS

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- FACTORIES
- DAIRIES
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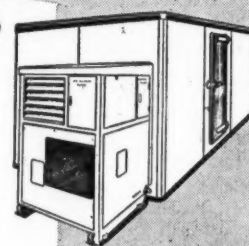
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Rugged quality construction assures long life. Simple to assemble... move or enlarge... insulated for low or medium temperatures... available with self-contained refrigeration system.

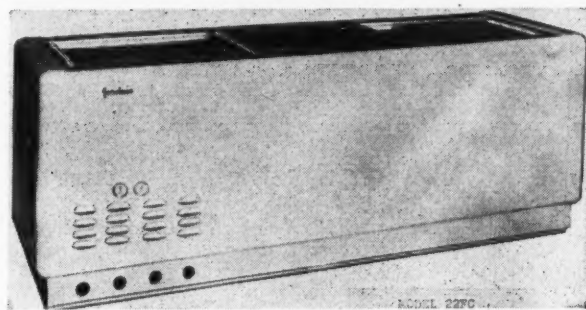
Available in sizes from 675 to 3,400 cu. ft. capacity.

- ★ STEEL CLAD
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- ★ HEAVY DUTY HARDWARE
- ★ ACCESSORIES
- ★ LEAK PROOF JOINTS
- ★ EXPORT PACKED



RECO

At right is the 22 cu. ft. model of Jordan's new self-contained frozen food display case, one of two additions to the Jordan line.



Jordan Refrigerator Adds 2 More Units to Its Line

PHILADELPHIA—Jordan Refrigerator Co. has just announced two additions to its line, models 16LL and 22FC. Built-in compressor housings, elimination of sharp corners, and more storage places are claimed by the manufacturer as improvements.

Model 16LL is a 16-cu. ft. self-contained home and farm freezer with vapor sealed lift-type doors,

adjustable temperature and thermostat controls. Insulation on the sides is 4 in., while the bottom has 5 in. Finish on the freezer is baked to assure long wear, according to the manufacturer.

Model 22FC is a 22-cu. ft. self-contained frozen food display case for clerk service or self-service. It is equipped with sliding glass doors, steel dividers, recessed footboard, and the same insulation and temperature control features as model 16LL, the manufacturer says. This display case may also be ordered in the 16-cu. ft. capacity.

Modo-Home Products Makes New Water Heaters

BOURBON, Ind.—Stainless steel automatic electric water heaters of 7½, 5, and 3 gal. capacities are now being manufactured by Modo-Home Products, Inc., here.

Equipped with a heating element divided into two bands—one near the bottom of the tank, the other toward the top—the heaters are said to provide maximum heat from current consumed. The heaters conserve current because of the small volume of water to be kept hot during inactive periods, the manufacturer explains. The thermostat is set at 180° F.

Because of its small size, the heater fits under cabinet sinks, in bathrooms, lavatories, or on shelves, the firm declares. It also saves heat formerly lost by running hot water through long lengths of cold pipe.

Prices range from \$44.50 for the 3-gal. heater to \$59.50 for the 7½-gal. heater, tax excluded.



Reach-in Combinations Introduced by Bryant

MINNEAPOLIS—A line of 38-cu. ft. freezers, combination freezer-refrigerators, and combination freezer-ice-makers, designed basically after a portable air borne refrigerator built for the armed forces, has been introduced by the Bryant Corp.

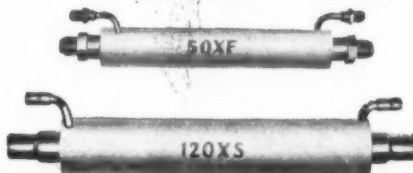
The units are of the upright, reach-in type, and feature all aluminum, sectional construction thus permitting installation in basements and other locations which ordinarily would not accommodate such a box.

In the full freezer model, the Regent, three of the four cold plates are used as shelves. Fast freezing is accomplished by placing the packaged food in direct contact with the plate surface.

The Kenwood combination freezer-refrigerator is divided into two sections. A 45° F. refrigerator is in the upper half and a fast freezer in the lower section. Separate thermostatic controls are provided for each compartment.

In the combination freezer-ice-maker model, the Windsor, all four cold plates are usable as shelves for direct-contact fast freezing of ice cubes, according to the firm.

MINIMUM PRESSURE DROP with HEAT-X CAST ALUMINUM HEAT EXCHANGERS



Shown are two models of Heat Exchangers—various sizes available. Both liquid and suction are copper tube. Ideal for use as water cooled capacity boosters on air cooled units. No internal joints—no by-pass.

WRITE AT ONCE FOR HEAT-X ENGINEERING SPECIFICATIONS AND CAPACITY TABLES

Orders Promptly Shipped

THE HEAT-X-CHANGER CO., INC.

415 Lexington Avenue, New York 17, N. Y.

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MORE BTU's PER WATT with HEAT-X CAST ALUMINUM LIQUID COOLERS

Here is one of Heat-X Coolers you can select from a range of sizes.

No freeze-up damage and no short cycling are two outstanding features. These Coolers combine top performance and low cost.



What's New (Cont.)

New A-P Valve's Seal Cuts Condenser Dirt Trouble

MILWAUKEE — More accurate control of water flow to water-cooled condensers and protection against troubles due to dirt and lime in water are claimed for the improved water regulating valve now being produced by Automatic Products Co. here.

The valve, model 68-B, is said to differ radically in design from the conventional valve in its operation and construction.

Instead of the ordinary type needle and seat, the A-P valve employs a molded composition seal on the valve stem. This seal is said to move across the polished stainless steel seat to provide a self-cleaning "wiping" action, which avoids common troubles due to dirt and lime in the water.

Laboratory tests in sandy water, said to be the equivalent of many years of actual field use, show no sign of wear on either the sliding seal or the stainless steel seat, the company reports.

Closer, more uniform control is provided by the unusually long stroke of the valve, according to the manufacturer.

Water flow to the condensing unit is regulated by means of head or receiver pressure which actuates a heavy duty bellows in the top of the valve, the company says.

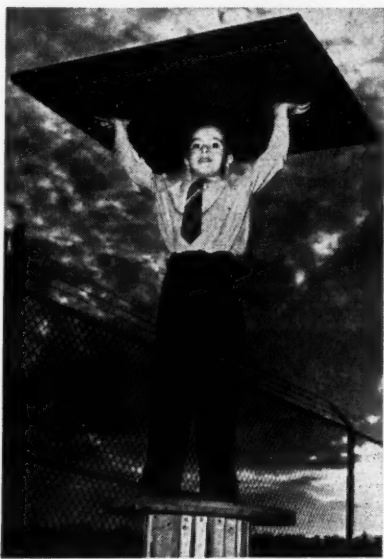
This bellows, in turn, moves the sliding valve stem and seal. Direct-through flow construction is reported to reduce pressure loss to a minimum, while chattering and water hammer are eliminated.

The valve has an operating head pressure range of 50 to 150 lbs. p.s.i. Because of a restrictive head pressure inlet orifice, compressor pulsations cannot affect the action of the valve, according to Automatic Products Co.

A special "O" ring seal is used to prevent leakage at the valve stem. This seal is said to be the same type proved during the war in high pressure hydraulic use.

Available in three sizes, $\frac{3}{4}$ in., $\frac{1}{2}$ in., and $\frac{3}{8}$ in. inlet and outlet, the valve may be used on "Freon," methyl chloride, as well as sulphur dioxide systems, the company statement said.

Automatic Products Co. has published a bulletin giving full details on the water regulating valve. The bulletin can be obtained from the company at 2450 N. 32nd St., Milwaukee 10.



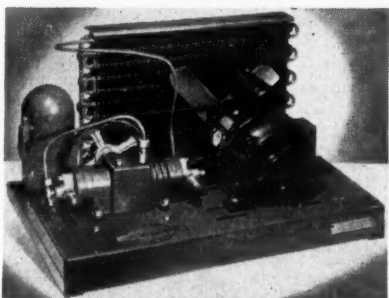
A six-year-old demonstrating the featherweight quality of U. S. Rubber's new insulating material.

U.S. Rubber Insulant Is Recommended for Reefers

NEW YORK CITY—A lighter-than-cork rubber for insulating refrigerators and refrigerated enclosures of all kinds has been introduced by United States Rubber Co.

The material is known as cellular rubber. It can be made in a hard or soft form. It will not absorb moisture and is resistant to fire, rot, acids, oil, vermin, and termites, the company claims. It is especially recommended for refrigerator trucks.

Cellular rubber is made by an expanding process in which chemicals containing nitrogen are mixed into a mass of rubber. The nitrogen upon release acts as a blowing agent, producing thousands of microscopic cells, each one separated from its neighbor.



Wide Adaptability Claimed for Controldtemp 2-Stage Unit

BROOKLYN—Said to be adaptable to a wide variety of applications, such as frozen food cases, reach-ins, showcases, etc., a $\frac{1}{2}$ -hp. two-stage condensing unit has been introduced by Controldtemp Corp. here.

The company claims that "never before has a two-stage unit been available in such a compact, efficient size."

G-E Resumes Output on Aire-Matic Vacuum Model

CLEVELAND — Premier Vacuum Cleaner Division, General Electric Co., is now producing an "improved all-purpose, cylinder-type vacuum cleaner" known as the Premier "Aire-Matic" Model 80, according to an announcement by J. B. Buckley, division manager.

The model was in Premier's line before the war.

"The improved Premier '80' is the result of continued research to produce a more powerful cylinder-type cleaner that would be outstanding for cleaning everything above the floor, besides being efficient for on-the-floor cleaning," the announcement said.

"Attractively streamlined, the maroon and gray Premier '80' features a $\frac{1}{2}$ -hp., rubber-mounted, ball-bearing, 600-watt motor that requires no oiling; a double-sized dust bag with high filtering efficiency; an exclusive rug nozzle with an adjustable brush for efficient cleaning of all floor coverings, and a swivel construction feature for easy cleaning under low furniture."

'Flashdur' Finish Developed

NEWARK, N. J.—Flashdur, a trade name for a new type of fast-baking finish (enamel or clear) has recently been developed here by the Maas & Waldstein Co.

The new coating material is designed to help manufacturers of metal products reduce production schedules by offering a surface that can bake to a hard finish in a few seconds.

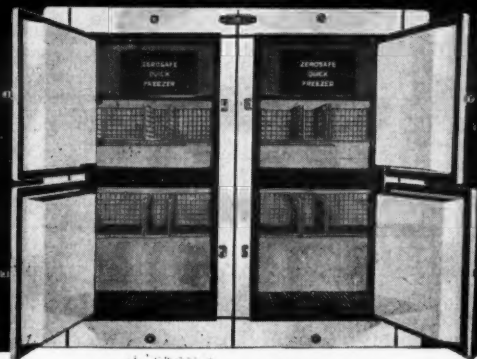


It's FULL FLOODED THE HUBBELL-YODER REFRIGERATION PLATE

Every square inch of surface is prime heat pickup

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SINCE 1939...ZEROSAFE by WILSON



WILSON ZEROSAFE FARM FREEZER
Sectional Model FF-80

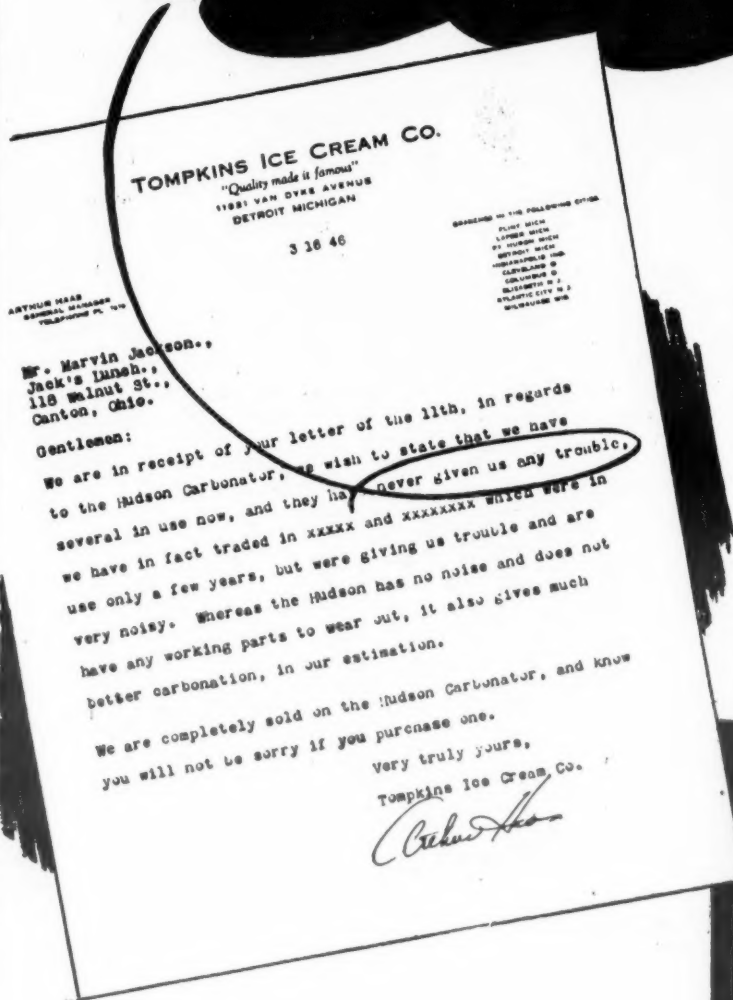
THE GREAT NAME IN FREEZER DESIGN

SINCE 1939 Wilson ZEROSAFE has been the greatest reach-in farm freezer in America... THE NEW WILSON ZEROSAFE IS NOW GREATER THAN EVER BEFORE... Not a toy, but big, ruggedly beautiful, efficient, with stamina for years of low-cost operation.

SIZES FOR EVERY NEED FROM 15 TO 120 CU. FT.

FOR FRANCHISE INFORMATION ADDRESS DEPT. II: WILSON REFRIGERATION, INC., SMYRNA, DELAWARE

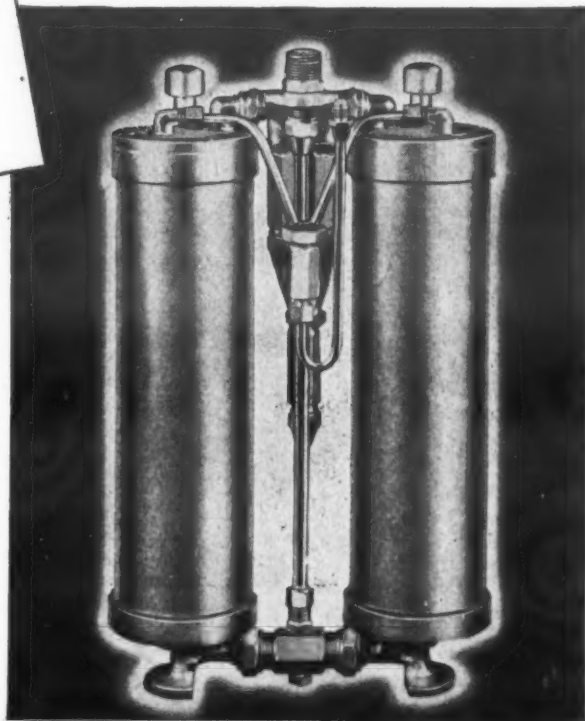
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HUDSON

CONSTANT PRESSURE CARBONATOR

This new, compact, self-contained carbonator delivers a steady flow of sparkling carbonated water at a CONSTANT PRESSURE up to 125 pounds at the draft arm regardless of city water pressure.



The above letter from one user to another speaks for itself. It emphasizes the fact that the Hudson Constant Pressure Carbonator does give satisfaction in use. Its motorless feature means both quiet and efficient carbonation. It eliminates soda coils, requires no oiling or greasing. It is compact, entire unit is installed inside fountain or bar. Its constant, even pressure is entirely automatic.

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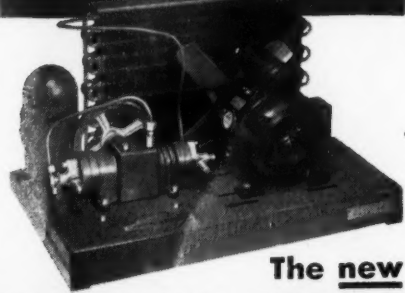


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This is the original Nolin Dry Beverage Cooler or All Purpose Refrigerator that you have heard so much about and which so many manufacturers have tried to duplicate. We are still the leaders because of the following features: One-third more coil surface, insulated for heavy duty service, individual disappearing modernistic doors, coiled freezer shelf, removable base for under bar installation, beautiful polished aluminum or stainless steel exterior. Hailed as the best cooler on the market today. Following sizes available 4', 6', 8' and 10'. Special crating for overseas shipments.

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The new
CONTROLDTEMP
2-Stage Condensing Unit

Air Cooled • 1/2 hp. • Package Type

Immediate delivery—less motor.
Motor quotations on request.

Small, compact, efficient. Ideal for frozen food cabinets, reach-ins or showcases.

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Kelnard Has New Location, Changes Company Name

LONG ISLAND CITY, N. Y.—Due to an increased volume of business and added lines, Kelnard Sales & Service, Inc. and Kelnard Supply Corp. have acquired new quarters at 38-27 30th St. here, Thomas C. Lindsay, president, has announced.

The new location will give the firms 50% more floor space, he said. Mr. Lindsay expects to occupy the new quarters on or about Jan. 1.

Here, the parts department, dispatch room, and general sales, and executive offices will all be on one floor, he declared. On the other floor, will be the shop, showroom for commercial refrigeration, and light storage space.

Because of the rising volume of commercial refrigeration sales, the company's name was changed from Kelnard Service, Inc. to Kelnard Sales & Service, Inc., Mr. Lindsay stated.

This firm, he added, is authorized to service Kelvinator and Leonard refrigerators, Seeger refrigerators, Ebco and Oasis water coolers, and Easy washing machines.

Malisch & Bear Form Firm

GLENDALE, Calif. — Malisch & Bear Refrigeration is the firm name under which Melvin F. Malisch and William A. Bear have published a certificate that they are conducting business at 229 South Pacific Ave., Glendale.

Delivery Truck's Refrigeration System Handles Fresh Meats and Frozen Products

BROOKLYN — A delivery service, bringing meats and frozen fruits and vegetables from the packing plant to the home in refrigerated trucks, has been inaugurated here by Adolf Gobel, Inc., slaughterer and packer of pork products.

The delivery service is designed to build up Gobel's pork products in neighborhood butcher shops and the routes are laid out with that object in mind, according to Gobel officials. The frozen foods are carried simply as a convenience to the housewives, they said.

To handle this new service, Gobel has ordered a fleet of route trucks with short, light duty chassis and oversize stock bodies in which refrigeration and insulation are installed to insure sub zero temperature for the frozen foods and 28° F. temperature for the meat products.

The main load compartment is insulated with 5 in. of packed fiber glass in the roof and 4 in. in the walls, doors, and partitions. In the floor, 4 in. of cork, covered with diamond plate steel panel, is used.

In this main compartment, it is only necessary to provide a temperature of 28° F. to start and the trucks return with about 34° F., according to Gobel officials. The trucks are normally out for eight hours.

For the frozen foods, a cabinet 21 x 21 x 30 in., is situated directly above the refrigerating unit.

The refrigerating unit, which is



Home delivery of perishable or frozen food-stuffs is made from this light refrigerated delivery truck.

located directly behind the driver's compartment, has a 1 1/2-hp. motor. It can be reached from the outside through an access door. If the truck should develop trouble on the road, the condensing unit could be plugged in at a service station to protect the payload, it is said.

The evaporating coils or plates are located on the sides of the load space directly behind the three shelves or racks on each side.

This leaves a wide center aisle for access to the load. When the truck leaves the plant, this aisle is partly

firm's staff is prepared to change if necessary.

Should the occasion require, Gobel is ready to use:

(1) bodies with increased insulation equipment, with evaporating coils only, to be hooked up at night at the plant, saving load space and weight,

(2) removable cold pack units from the plant refrigerating department, or

(3) all cork insulation with the load pre-frozen to a temperature low enough to last eight or 10 hours without refrigeration in the truck.

If experience should lead to the elimination of frozen vegetables and fruits, it would simplify the refrigeration problem considerably, Gobel believes.



Interior of the truck. Plate coils are directly behind the racks.

filled with cartons of meat products, such as bologna, frankfurters, bacon, etc. As the load is worked, the cartons are emptied, folded up, and stored at the emptied ends of the racks.

The truck is loaded through double doors at the rear. On the route, the load is worked entirely from the front via the curb level entrance step. The door of the insulated partition behind the driver's compartment opens forward. This opening is smaller than that of the rear doors, thus lessening the loss of temperature.

The truck body is of sufficient height to allow the driver to work in the refrigerated compartment without stooping, thus lessening fatigue and improving the driver's sales ability, Gobel claims.

So far, the refrigeration, insulation, cabinet, and rack arrangement described have proved satisfactory, Gobel officials say. However, the

Ease Sales Restriction On Items Earmarked For Federal Housing

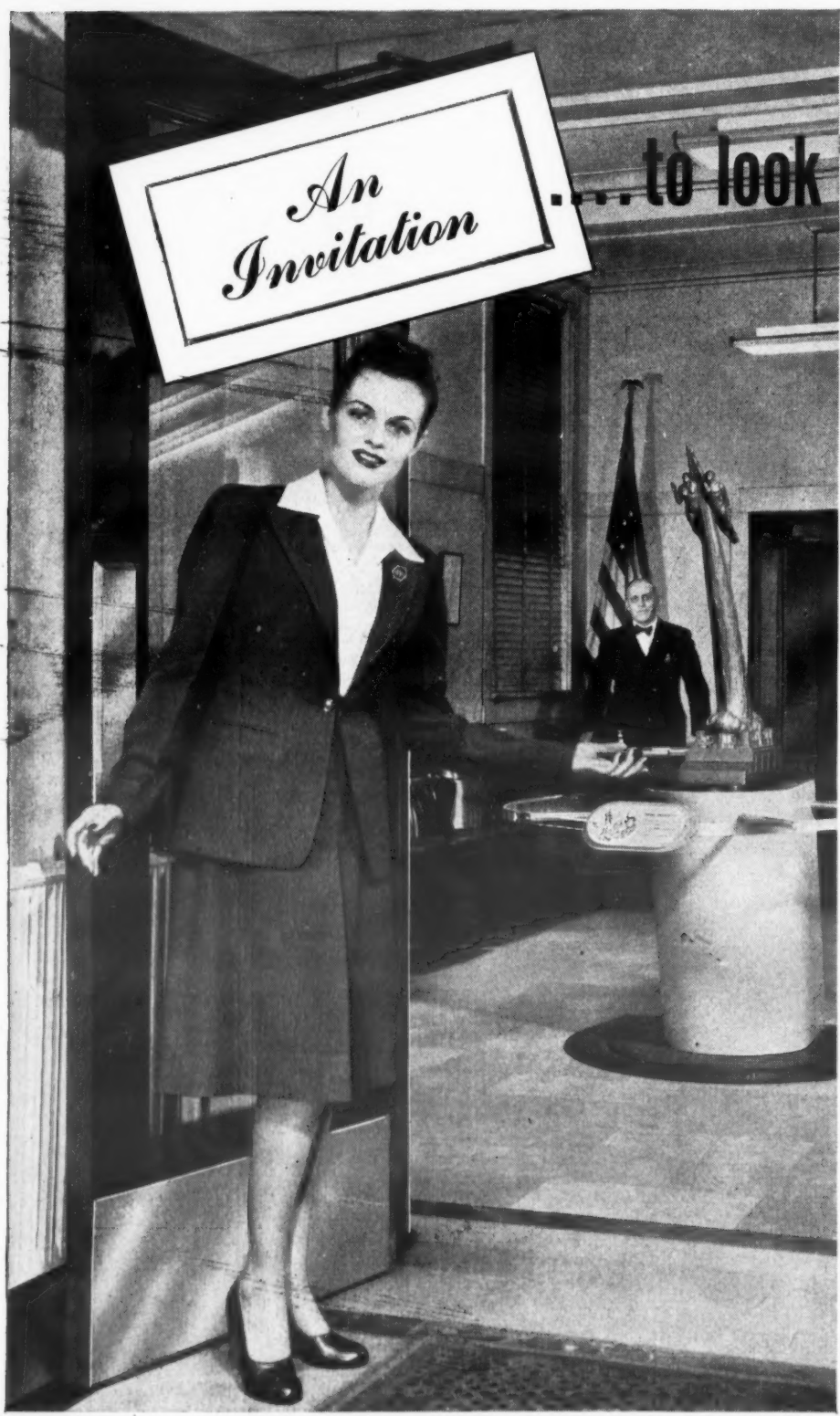
WASHINGTON, D. C. — Arrangements whereby producers can be occasionally released from sales restrictions on "earmarked" plumbing and heating products which will not be required for Federal Public Housing Authority veterans' temporary re-use housing projects have been announced by the CPA.

The arrangements were made by amending Limitations Order L-357 to provide that where a producer is formally notified by FPHA that a specified part of his completed or expected production of earmarked products will not be required, that part is released from the sales restrictions of the order.

Formal notification from FPHA must be made in writing over the signature of an assistant commissioner of that agency and must contain a statement in substantially the following language: "This is a formal notification under Order L-357 releasing the quantities specified above from the sales restrictions."

When such a statement is received, the producer may sell the released quantities as he wishes, subject to other applicable CPA orders.

The earmarked products include the following equipment made specially for FPHA projects: Cooking ranges (21 in. gas to 36 in. oil), ice refrigerators (5 cu. ft.), shower stalls, space heaters (gas or oil), water heaters (20 gal. gas, 30 gal. oil).



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We manufacture valves, dehydrators, strainers, manifold assemblies, accessories and fittings—an extensive line of original equipment for the refrigeration industry.

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Model 100—
1 3/4" x 1 1/2"—2 cyl.,
flywheel 10" diam.,
2-groove "A" section
—1/2 HP. For use only
with Freon refrigerant.

Features: Separate cylinder block, double-throw eccentric, bronze connecting rods, Crane Shaft seal, simplified valve design, disc-type suction valves in top of cylinder block, reed discharge valves. Large volume crankcase prevents oil "boiling off."

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THE COMPRESSOR YOU CAN DEPEND ON

Tyler Tells Dealer Group Deliveries of Equipment Will Pick Up Very Soon

DETROIT—The belief that fixture dealers can expect a steadier flow of equipment in the not-too-distant future was expressed by Robert L. Tyler, president of Tyler Fixture Co., during a talk before members of the Food Equipment Dealers Association of Detroit.

In commenting on the production outlook, Mr. Tyler told the dealers he didn't think his firm is "too far away from taking care of you."

Mr. Tyler made the observation while outlining a check sheet which he suggested his listeners might use to determine whether or not their businesses are fulfilling their objectives. He advised dealers to:

1. Be sure your service department is on a parity with your sales department.

2. Take very good care of your records.

3. Check the location of your display room. ("Possibly you've gone three to five years without giving any thought to location. Maybe you're missing transient traffic enjoyed in previous years.")

4. Check your sales methods.

5. Try to develop flare.

6. Watch out and don't be greedy.

7. Select a line which you know; visit the factory and get acquainted with the sales organization.

Turning from what the dealer should look for in himself to what the manufacturer looks for in the dealer, Mr. Tyler—expressing his own personal views—said the producer wants to know:

1. What sort of reputation does the dealer have with the trade? ("Nothing gives a truer picture. . .")

2. How long has the man been in business?

3. Does he have a reputation for doing quality work?

4. Will he be competitive or will he gouge?

5. Has he followed a direct-selling policy, or otherwise?

6. What is his advertising policy?

7. What is his treatment of his organization, and what is the spirit of his organization?

Mr. Tyler recommended that the dealers ask themselves what expenditures they are planning in order to improve their personnel, location, service department, and investments. On the latter point, he advised them to invest in stock but to "be sure what you're buying."

"Check these points," Mr. Tyler observed, "and I feel sure you will enter the selling era in a healthy condition."

A new board of directors, elected at the close of the meeting, includes Ed. Daubenspeck, of P. E. Daubenspeck, Pontiac; Victor Fabian, Square Deal Refrigeration Sales & Service; Allan Foster, Almor, Inc.; G. D. Lunn, Lunn Bros.; and George Syler, Syler Fixture Co. The board will elect the new officers, who will be installed at a dinner meeting Jan. 28.

\$20,000 Capital Stock Set

HOUSTON, Tex.—Roger H. Penick, Willard K. Wood, and Ralph Fite have incorporated the Appliance Wholesalers, Inc., to do business here with \$20,000 authorized capital stock.

Associated In New Eastern Firm



L. R. ST. ONGE



V. C. PATTERSON



A. W. RUFF

V. C. Patterson & Associates Organized To Design Frozen Food and Dairy Plants

YORK, Pa.—To serve the dairy and frozen foods industries, V. C. Patterson announces the expansion of his facilities and the formation of V. C. Patterson & Associates with offices at 415 West Market St., York.

Associated with Mr. Patterson in the firm are A. W. Ruff and L. R. St. Onge, engineers with a wide background in the refrigeration industry.

The services of the new firm will cover the complete design of new plants for the frozen food and dairy industries including project justification, survey and layout, architectural design and specifications, construction supervision, and plant operation.

At the age of 17, Mr. Patterson started a career in refrigeration, and for seven summers prior to finishing college he operated a steam driven Frick ice plant in Texas. He received a degree in mechanical engineering from the University of Texas in 1925, after which time he joined York Corp.

After taking the two year college apprentice course he moved to Detroit, Mich. and for three years built and operated large ice manufacturing plants. He then returned to York Corp. and remained for 15 years specializing in design, development, and operation of refrigerating equipment for the dairy and frozen foods industries.

Mr. Ruff, who recently resigned as vice president in charge of engineering and development of York-Shipley, Inc., manufacturer of oil-fired domestic and industrial equipment, has a wide background in the refrigerating, air conditioning, and heating industries.

A graduate of the Massachusetts Institute of Technology, he came to York Corp. to enter their student engineers course. He soon transferred to the equipment development department, becoming head of the department in 1935.

In 1939, Mr. Ruff joined the York Oil Burner Co. (later York-Shipley, Inc.) in charge of engineering and development. His experience there included the development of domestic and industrial oil fired equipment, application of products to special war requirements, development of war products, such as airplane engine heaters and smoke generators as well as the advanced line of postwar equipment.

Mr. St. Onge brings to the firm 20 years of experience in all phases of refrigeration and air conditioning,

including eight years of construction and operation.

After receiving his degree in mechanical engineering at M.I.T. in 1926, Mr. St. Onge completed a two year college training course in refrigeration with the York Corp. and spent the next two years in the operation and construction of ice plants for a New England ice manufacturing company.

From 1930 to 1936, to widen his field of experience, he engaged actively in the construction and operation of all kinds of refrigerating plants in New England for York.

For the past 10 years Mr. St. Onge has been in charge of layout and application engineering for the Philadelphia district of York Corp.

IMMEDIATE DELIVERY WALK-IN COOLERS

- All Metal interior and exterior construction.
- Bright heavy gauge aluminum exterior.
- Rust proof galvanized interior.
- Lag bolt and pod assembly.
- Inside marine light with outside pilot light.
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Here you'll see the latest developments in the complete Curtis line of Refrigeration and Air Conditioning Equipment.

Find out how these Curtis engineering features mean smooth, dependable performance and unusually long machine life.

1. Timken Bearings
2. Extra large condensers
3. Self-oiling — positive pressure lubrication
4. Finest materials — precision construction
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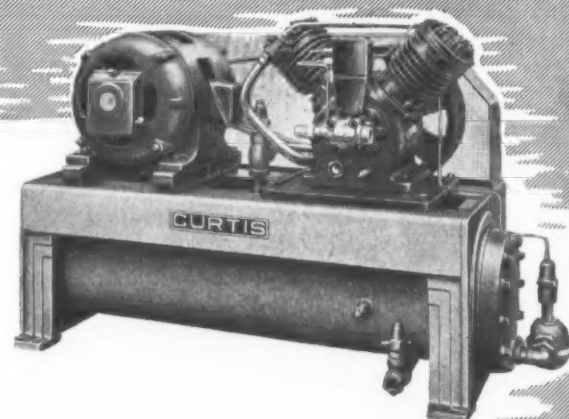
See why hundreds of Curtis dealers have found that fewer service calls on Curtis equipment means more profits per sale.

See You in Cleveland!

CURTIS REFRIGERATING MACHINE DIVISION
of Curtis Manufacturing Company
1912 Kienlen Avenue • St. Louis 20, Missouri

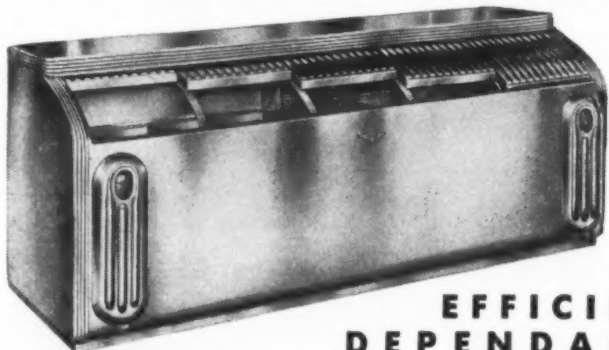
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**EFFICIENT
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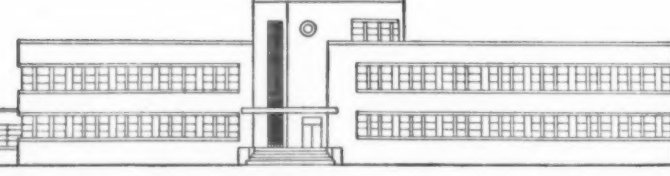
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Servicing Truck Refrigeration Units

Editor's Note: Further questions from owners and operators of trucks equipped with Trail-Aire reverse cycle cooling units are presented in this instalment in collaboration with Advance Mfg. Co., the manufacturer, and Henry O. Kirkpatrick, chief engineer of Advance.

Instalment No. 15

Wiring a 'Jumper' Around Control Box

Question: Our driver, who was in Detroit, advised that the matter of wiring a "jumper" around the automatic control box was outlined to him, or at least mentioned. Is it possible for you to draw us a sketch or diagram showing how this may be done, so that we may be able to do our own work?

Answer: It is possible to wire a "jumper" around the box and control the engine manually. We recommend that this be done only in extreme emergencies. Here is the procedure for doing this:

If the unit will not run because of apparent trouble in the control box, then the operator should test by taking a screwdriver and "jumping" the two terminals on the control box marked "Control Switch." If this action causes the unit to start, then the trouble is not in the control box but is in either the thermostat, on-off switch, or the high pressure cut-out switch.

To determine if the trouble is in the high pressure cut-out switch remove the cover of the switch to see if the contacts are open. If so, do not run the unit until you have a refrigeration mechanic check to see why the high pressure cut-out is open.

If the trouble is not in the high pressure cut-out switch, then it is a safe procedure to wire across the two terminals on the control box marked "Control Switch" and operate the unit manually to bring in a load.

If the unit does not run when the above mentioned "Control Switch" terminals are "jumped," then the trouble is in the control box, and the unit may be operated by connecting a wire to the terminal on the control box marked "Ignition" and connecting the other end of this wire to the terminal on the control box marked "Battery."

This should cause the unit to run unless there is trouble in the ignition wiring, or starter solenoid switch, or motor.

Use of Oil Separators On Trail-Aire Units

Question: We have just received a shipment of 10 Trail-Aire units and note that none of these are equipped with an oil separator. All the units we received previously had oil separators. Were the oil separators omitted by accident?

Answer: It is agreed by everybody concerned that a refrigeration system will work more efficiently if the compressor lubricating oil is kept out of all parts of the system except the compressor. To this end, the oil separator was developed and has enjoyed many years of successful use on nearly all types of applications.

On all of these applications there is one point of operation that is highly essential to the success of the oil separator—this being a unit that throughout its entire life operates to maintain a given temperature with only the normal amount of cycling shut-down.

A truck refrigeration unit does not fall with the above classification. We adopted the use of an oil separator on our unit in the belief that it would be of some help as regards to lubricating the compressor and also to possibly increase the overall efficiency of the unit. Our difficulties with the oil separator showed up at the compressor.

In analyzing this problem we found that during an extended shut-down, the liquid refrigerant found its way into the oil separator, raising the level in the separator enough to open the float valve, and flowed into the compressor crankcase. The crankcase eventually became loaded with liquid refrigerant.

When the unit was started this liquid-oil mixture was drawn out of the crankcase and, along with a quantity of very wet vapor (half liquid) coming from the evaporator, was pumped into the oil separator. The separator, being cold at this time, did not separate the oil from the refrigerant, and it naturally returned to the crankcase. This caused severe "slugging" in the compressor. This process repeated itself until the unit ran long enough to heat up the separator and crankcase (about 30 minutes) during which time the float valve in the oil separator was held open.

In a couple of cases this condition caused the compressor to "seize" due to the hot mixture of oil and refrigerant coming into contact with bearings as it came into the crankcase. During this initial running period, if the unit were stopped, the high and low pressure would immediately equalize. From a service standpoint it was almost impossible to pump down this job unless it was allowed to run and become warmed up.

Another set of conditions that had a bearing on the decision to discontinue the oil separator was the

fact that service men in the field were adding oil to jobs that already had a full charge. This would allow the float valve in the separator to stay open all the time and eventually this would do one of three things:

1. Seriously affect the cooling capacity of the unit.
2. Cause a bearing to seize due to heat.
3. Cause eventual bearing failure due to oil break-down caused by heat. This compressor oil starts to break down above 160° F.

In conclusion, we want to point out that it is much more difficult to separate a "Freon"-oil mixture than it is a methyl chloride-oil mixture.

System Is Loaded With Sludge and Carbon

Question: Please be advised that we have had difficulty with our unit and are sending the trailer containing this unit to your plant for repairing and placing in first-class condition. Please give us a report of your findings.

Answer: We have repaired the unit in your trailer at our plant. The system was loaded with sludge and carbon caused by moisture getting into the system and a poor grade of lubricating oil being added to the system.

The moisture may have gotten into the system from two causes:

1. Lines breaking and allowing the gas to leak out and moisture-laden air leak in under action of the compressor; and
2. Moisture-laden air being admitted to the system when it is opened by a service man.

In any event, the service man should take steps to remove the moisture from the system before placing it back in operation. This was not done on this unit.

In addition, we found that the original dryer and strainer that are furnished on each unit had been removed and replaced by a smaller dryer and an obsolete strainer that had been used on a Frigidaire unit built about 1930 or '31.

Beyond a doubt this strainer had not been cleaned before being put on this unit, because there was evidence that some sulphur dioxide was put into the system. (Sulphur dioxide was used in the Frigidaire mentioned above.)

Whoever serviced this unit also altered our method of installing tubing and had removed some of the original tubing and in its place had installed "loops" of tubing where a straight run should have been. Experience has taught us that "looped" tubing is not good on truck installations.

It was our understanding that the evaporator coil had been removed from this unit by the service man for the purpose of repairing leaks in this coil. In fact, we saw a bill for a considerable sum covering this alleged work. We removed this coil and inspected all joints in it for signs of having been repaired, however, and could find none.

In order to make sure that there would not be any question about the evaporator coil we replaced the coil with a new one of different design having more capacity.

All the changed tubing was re-worked to the original setup. The oil in the compressor was changed three times in order to clean the compressor crankcase of sludge. The compressor valve plates were loaded with carbon and sludge deposits. They were replaced with new plates.

A new dehydrator and strainer were installed in the unit and in order to trap out the sludge in the system we had to install a special trap that is to be left in the system for about 100 hours of operation. When this trap (painted green) is removed, the sight glass should be installed in its place.

The receiver tank was so loaded with sludge that it had to be replaced with a new one.

A new expansion valve was installed on the evaporator. This also was necessitated by the presence of sludge in the system.

We want to go on record as saying that never in our entire experience have we seen a unit that had been as abused by the carelessness and/or inexperience of the refrigeration service man as this one had. Perhaps this experience will convince truck operators that this unit is not a piece of mechanism that you push a button on and then forget it, but one that should be watched and taken care of the same as their tractor engine or any other piece of mechanical equipment.

St. Louis Utility Teaches Proper Use Of Home Freezer for Bakery Goods

Home Economics Experiments Provide Valuable Tips to Freezer Owners

ST. LOUIS—Through expensive experimentation into the problem of quick-freezing of bakery products, the Home Economics Department of the Union Electric Co. here, is encouraging St. Louis housewives to utilize frozen foods.

The 10-year old home economics department, headed by Miss Esther Lee Bride, has pioneered the way in frozen bakery products in the St. Louis area—beginning in late 1944 when the department installed an experimental freezer, which was to be used to help housewives meet war-time food problems economically.

Every type of food freezing activity was tested, as well as dehydration, preserving, etc.—on the theory that by developing practical methods of food preservation, housewives could put up reserve stocks of food products to meet various shortages.

HOUSEWIVES' COMPLAINT

"In addition, we experimented with freezing, due to the fact that many people were buying home freezers, renting lockers in commercial locker plants, and otherwise making use of refrigeration," it was pointed out.

"Many women in our regularly scheduled home economics classes confessed that they were spoiling food, and getting poor results from freezing—simply because they did not know how to handle foods under this process. Therefore, we took it on our own shoulders to learn first-hand the problems connected, and the ultimate solution."

With a staff of from 25 to 30 women regularly delving into such problems, the Union Electric department has thus been able to make standard in St. Louis a number of food preservation practices which prior to 1944 were still largely in the experimental stage.

READY-REFRIGERATED PIES

Bakery products sharp-freezing began in 1944, when Miss Bride and her fellow home economists launched the program with two varieties of

fruit pies. The idea, at the time, was to make it easy for the housewife to buy ready-refrigerated pies, to be kept frozen until necessary, as a time-saver and an economical feature for small families.

Fruit pies were made up under this program in two processes. One variety consisted of unbaked crust with fresh fruit fillings. The second was pies made up in normal fashion, baked and then refrigerated. After testing some 20 pies thus prepared, Union Electric determined that the unbaked variety worked out much better, providing a more flaky pastry, richer-tasting fillings, and other advantages.

UNBAKED VARIETY BEST

The pre-baked variety, on the other hand, was not as satisfactory, as they steamed badly during thawing out in the oven, and a cellular breakdown apparently occurred in the fruit—resulting in off-taste and a generally softened pie with considerably reduced eye-appeal. After running enough tests on the pre-baked pies, the Home Economics Department concluded that all-fresh unbaked doughs and fruits were most adaptable to the housewives needs—and has taught this theory ever since.

The pies were made up six at a time, and sharp frozen in an ordinary home-type freezer, which is installed in Union Electric's basement home economics kitchen. Some pies have been frozen as much as a year, and emerged tasty and fully worthwhile. In fact, the Union Electric Department helped to launch the Pfeiffer Pastries Bakery in St. Louis into the frozen bakery products field on the strength of exhibition of such pies.

TIPS FOR FREEZER USERS

Many handy tips for home users of freezers have developed from this program. For one thing, Miss Bride has ascertained that raw fruit pies work out well if sugar is placed dry

in the bottom of the crust, to absorb into the fruit at thawing time. Also, it has been learned that nothing but absolutely premium ingredients can be used—because flavor deficiencies show up more quickly in the frozen product.

Also, students at Home Economics classes are instructed to mix butter in with the fruits, for better flavor. Another point stressed, is the brushing of the top of open-faced fruit pies with melted butter—which seals in the juices, and likewise results in protected flavor during the baking later on.

'FLOATING CRUST' THEORY

Still another theory which the Utility has proven practical is the use of "floating crust" for frozen pies. This involves making the pie crust $\frac{1}{4}$ in. smaller than the pie—so that when it is baked, there is plenty of space for steam to escape from the fruit without affecting the flavor or quality of the dough. Numerous bakings have also proven that it is unwise to add spices to frozen pies, inasmuch as these discolor the fruit, and often develop off-flavors.

The Home Economics Department is just getting started on dough freezing, with the ultimate goal of reducing the amount of yeast necessary for leavening by one-half. Heretofore, most bakers have used double amounts of yeast in quick-frozen doughs—a practice which Miss Bride feels will become obsolete.

National Representative For Frigidaire Cabinets



G. F. JENKINS

DAYTON, Ohio—G. F. Jenkins has been appointed National Ice Cream Cabinet Sales Representative for Frigidaire Division of General Motors, reports H. A. Beck, manager of Ice Cream Cabinet Sales.

Mr. Jenkins, who was formerly assistant supervisor of part sales of the company's service department in Dayton, has been associated with Frigidaire since 1933. Prior to that time, he was zone and regional sales manager for Delco Light Co. He was honorably discharged from the Armed Forces with the rank of Major in 1944.

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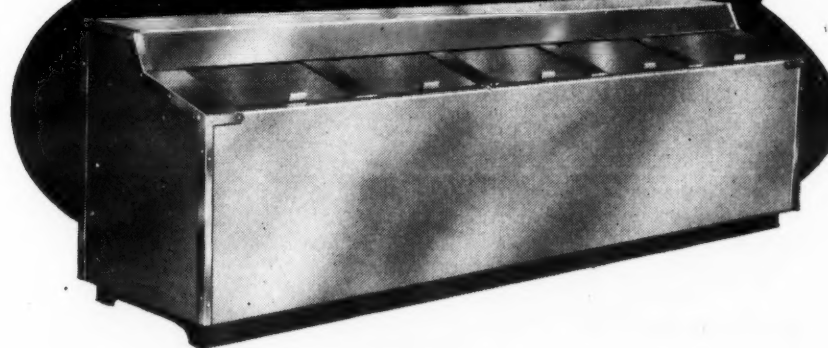
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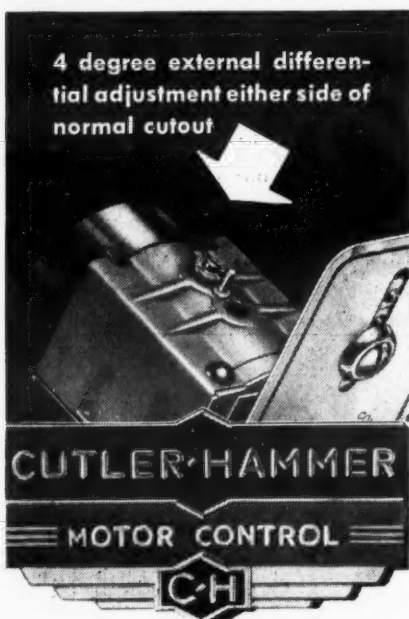
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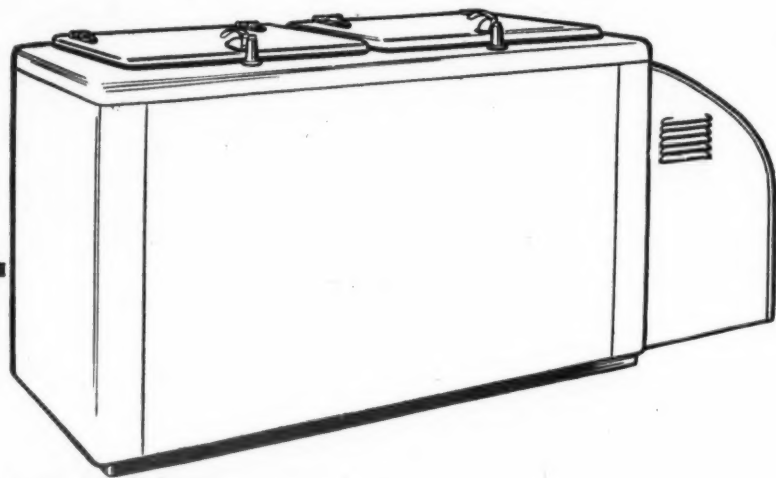
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Frozen Food Industry Is at Mercy of Proper Transportation, Birds Eye Official Says

'We Must Produce at 0°, Transport at 0°, Store & Distribute at 0°, Huff Tells ASRE

NEW YORK CITY—"The most brilliantly contrived production and marketing plans [of the frozen food industry] are completely at the mercy of whether or not the product can be transported and held under proper temperatures," contends A. E. Huff, manager of warehousing and transportation of Birds Eye-Snyder, Inc., pioneer frozen food packer.

In a paper entitled "Transportation of Frozen Foods" prepared for presentation at the recent annual meeting of the American Society of Refrigerating Engineers here, Mr. Huff analyzed the present status of shipping facilities for frozen foods offered by rail, truck, ship, and air.

"About the time that World War II began, the frozen food industry had become of age and began to experience an acceleration in expansion," recounts Mr. Huff. "New packers were constantly coming into the picture, and those who had been in business for some time were experiencing heavy increases in their production."

Insufficient Cars Available

"By the time the war ended, the frozen food industry had expanded to such an extent that there were insufficient superinsulated refrigerator cars and trucks to transport product at the rate of shipment required to keep the trade adequately supplied. This forced many shippers to frequently use standard refrigerator cars and often trucks of a questionable construction, from the standpoint of insulation and modes of refrigeration."

"This situation," declared Mr. Huff, "caused the loss of a considerable amount of product through defrosting in transit and it is reported from reliable sources that it resulted

in the filing of claims ranging in amounts for \$3,000 to \$7,000 on some cars. . . .

"With an equipment situation such as this, and considering the phenomenal growth of the frozen food industry, the claim situation is bound to increase in proportion to the industry's expansion. This poses a serious problem for both industry and transportation, as we must not overlook the fact that when freight rates are analyzed, the claim experience applicable to the product is also a factor considered when rates are revised either upward or downward."

Not an Indictment of Transportation Systems

"This is not intended as an indictment of our transportation systems, for we must consider the fact that the frozen food industry experienced its great and sudden growth while we were at war, and at a time when there was a shortage of critical materials from which additional rolling stock must be constructed."

"Then too, it was only a few years back that there was any concerted action on the part of frozen food manufacturers to consult with the transportation agencies on the subject of additional and proper equipment," admitted Mr. Huff.

Indicating that there will be a shortage of superinsulated frozen food refrigerator cars for another year or two, he pointed out that even this type of car does not provide 0° F. temperature, which is the temperature authorities have agreed upon as necessary for frozen foods.

"Scientific research has definitely established the fact that fluctuation in the temperature of quick-frozen foods encourages an enzymic action and greatly increases the separation of the solids and liquids contained within the product," he also declared.

"This causes a growth in the size of the ice crystal, resulting in a rupturing of the cell structure, thereby impairing the quality of the product and defeating the original purpose of quick-freezing. Even today there are some who do not fully appreciate the import of this principle."

"Most quick-frozen foods are frozen at 0° F. or below, which more or less sets the zero mark as the standard temperature to be maintained from the time of production until it reaches the consumer. This means, then, that we must produce at zero, transport at zero, and again, store and distribute at zero. The cold storage warehouse industry, for the most part, has upheld its end of the burden temperature-wise, but transportation-wise we are not so fortunate."

Describes Shipment From Oregon to New York City

To illustrate the present-day transportation problems, Mr. Huff cited a typical shipment of frozen foods from Oregon to New York City during July. A superinsulated refrigerator car is first precooled for 24 hours, prior to loading with frozen foods and icing with water ice and 30% salt.

After the car is spotted at the loading dock of the cold storage warehouse it is carefully inspected to be sure it is properly equipped with floor racks and sidewall strips to insure good air circulation. A canvas curtain split down the middle is hung over the door opening to reduce heat infiltration.

If the car is loaded by conveyor,

a canvas canopy is usually erected over the conveyor to keep off the sun and warm air, or if hand trucks only are employed, they are scheduled to move directly from warehouse to car, not being allowed to stand on the dock and thus warm up the frozen food. After the car is loaded, a recording thermometer is installed, the doors fastened, and the car is ready to move.

The car is routed through northern and midwestern states so that during its 10-day trip from Portland, Ore., to New York City it passes through outside air temperatures ranging from 62° to 95° F. There are 12 different icing stations en route where the car is stopped, hatch covers opened, plugs removed, and the car re-iced. Total elapsed time for re-icing is seven hours, and during another 24 hours the car stands idle in railroad yards awaiting train connections.

Frozen Food Rose to 19° F. in 10-Day Trip

When the car arrived in New York City after the 10-day trip, the temperature of the frozen food had risen from 0° F. at the time of shipment to 19° F. Air temperature in the car was 22° F.

"We now remove the tape from the Ryan recording thermometer, and careful study indicates that the air temperature in the car after re-icing was approximately 15° F.," said Mr. Huff. "This same tape shows a destination air temperature of 22° F., but there are many points on the tape between origin and destination that show a sharp rise in temperature, in some cases as high as 28° F."

"If we check this tape with the car schedule, we find that invariably these peaks in car air temperature occur at the icing stations, it being logical to assume that these increases

(Concluded on next page)

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Transportation by Water Might Solve Some Frozen Food Problems, Huff Says

(Concluded from preceding page)

in temperature occurred when the plugs were removed and remained out long enough for the ice to be tamped down in the bunkers and additional ice and salt added."

Much could be done at the icing stations, believes Mr. Huff, to reduce these temperature fluctuations. He suggests keeping plugs out a minimum length of time; providing the proper size chunks of ice; intelligent addition of salt at the right time and in the proper proportions.

At its destination in New York City, this car was unloaded directly into a warehouse kept at 0° F. where frozen food remains for a few days, or perhaps several months.

"If the warehouse we have now reached is considered a distribution point warehouse, the product will be subject to transportation in truckload lot to a smaller town, sometimes 200 or 300 miles away," continued Mr. Huff.

Shipment by Truck

"The warehouseman is now called upon to deliver the merchandise from zero temperature to this truck, and here again is an opportunity for the temperature to fluctuate if the loaders fail to load the truck promptly and keep the doors open as short a time as possible. The truck operator has a responsibility in seeing that he has available an adequate supply of dry ice to prop-

erly refrigerate the load.

"It is here that a great deal of trouble can be encountered, as there are few operators who have been able to arrive at any particular formula as to the quantities of dry ice to use to produce the desired temperature in accordance with the amount and thickness of insulation that their truck contains."

The temperature of the frozen food may rise to 7° F. during the trucking operation, after which it is placed in the holding room of the local distributor, where the temperature is pulled back down to 0° F. again. Thence the frozen food is shifted to the retail outlet where it is placed in a low-temperature cabinet with a temperature of about 10° F., according to Mr. Huff.

"It will be noted that this particular lot has experienced five distinct fluctuations in temperature, namely, 0° to 19° to 0° to 7° to 0° to 10°," he emphasized.

"There is one more phase of distribution after reaching the distributors' hands which has presented some serious problems," continued Mr. Huff. "I refer to the movement of so called overnight shipments which are usually made in small lots, either by Railway Express or in less truckload quantities."

Choice of Container Requires Caution

"Even though dry ice might be employed in an effort to properly refrigerate shipments of this kind, extreme caution must be exercised as to the type of container selected to make such a movement."

"A number of distributors employ types of shipping containers similar to the Church container, probably the best known container of its kind. If ordinary fiberboard shipping containers are used without any additional protection, it is almost a foregone conclusion that the product will be delivered in at least a semi-frosted condition."

"If less truckload quantities are moved, and adequate dry ice shipping containers are not available, an insulated truck should be employed. After the merchandise is loaded therein a sufficient quantity of dry ice should be placed over the load which is then covered with an insulating blanket so that the CO₂ gas emanating from the dry ice will completely envelop, at all times, the cases of product being transported."

"There are a few mechanically refrigerated trucks available for this type of work, and they should, of course, be given preference over the non-mechanically refrigerated conveyance," said Mr. Huff.

Coastal, Inland Ships Offer Possibilities

The possibility that another form of transportation—by water—may solve some problems confronting the frozen food industry was cited also by Mr. Huff. It played an important role in the war, but then economic considerations were not of prime importance.

"In the not too distant future, though, it is expected that inter-coastal steamship companies, and possibly inland water route operators, will be in a position to offer to the frozen food industry certain types of ships and barges partially or completely insulated, and so refrigerated as to maintain a zero temperature."

"The likelihood of this will become more manifest when the industry reaches the point where it will be advisable to move large quantities of frozen foods, from, to, or between the Atlantic and Pacific coasts, and possibly the Gulf ports. In connection with this type of movement, however, there are certain economic factors that must be settled before the service offered will be readily acceptable to the industry."

\$50,000 Locker Plant Program Underway in New London, N. H.

NEW LONDON, N. H.—Permit to start construction on the latest New Hampshire locker plant, has been issued to the New London Locker Plant, Inc., and work on the foundation will be commenced immediately. Approximately \$35,000 has been subscribed toward the estimated cost of \$50,000. James E. Shepard is president of the corporation.

Manages M-H Division



T. S. CARLYE

Following his recent appointment, he is now serving as wholesale division manager for Minneapolis-Honeywell Regulator Co. He also manages stoker controls sales.

Harrod-Reynolds Co. Formed To Wholesale & Retail

LOUISVILLE, Ky.—The Harrod-Reynolds Refrigerator Co. of Frankfort, capital \$6,000, has been incorporated to operate as wholesale as well as retail business. The incorporators are Earl Harrod, George H. Reynolds, John W. Hughes, Jr., Guy M. Reeve, Jr., Charles H. Morris, and Arthur Wittwer.

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'Freon' Compressors and Condensing Units (1 to 10 h.p.)

Ammonia Compressors 4x4—5x5—6x6

Ammonia Valves 1/4" to 5" Screwed and Flanged

ALSO

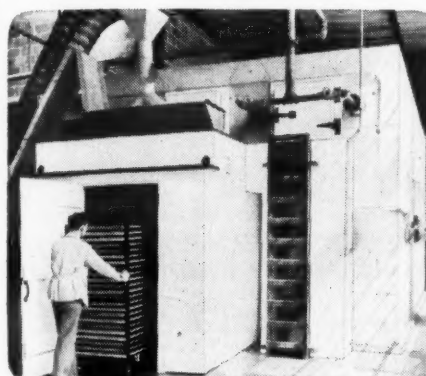
Ammonia Flanges—Strainers—Discharge Check Valves

AIRCRAFT PRODUCTION ENGINEERS

DIVISION OF
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Community Refrigeration Center Installs Big New Frick-Freezer

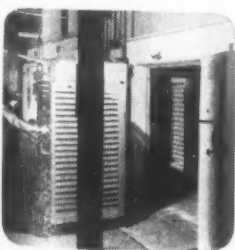
The Consumers Ice & Coal Co. operates at Lancaster, Penna., an outstanding Community Refrigeration Center. Here quick-freezing has been a major service since 1941, when four Frick Blizzard Freezers were installed.

This season a great new tunnel-type Frick-Freezer, 60 ft. long and equipped with both a conveyor and push-trucks, re-

ceives up to 4,000 lb. of foods per hour from the elaborate processing machinery. The original Blizzard Freezers are also in use. Thus the products of lush Lancaster County farms go to sub-zero storage—and to market! Frick-Freezers are adapted to handling ANY foods, dependably and profitably. Let us help you solve your freezing problems.



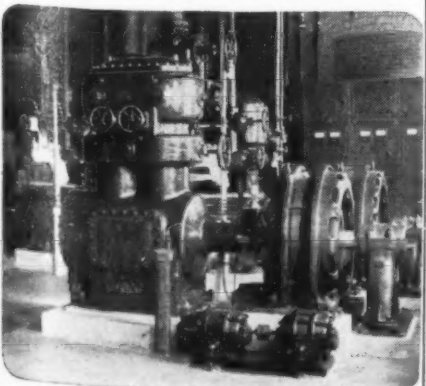
New Processing Building and Frick-Freezer at Lancaster.



Four Blizzard Freezers at The Consumers Plant.



Three New Frick Refrigerating Machines.



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RATES for all other classifications \$5.00 per insertion. Limit 50 words.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count.

POSITIONS WANTED

COMMERCIAL SALESMAN with 11 years' experience as repairman, engineer, salesman and excellent following in Illinois, Missouri, Indiana, Kentucky, Tennessee, and Arkansas, desires to represent a good line of commercial equipment. Present sales average from \$4,000 to \$10,000 weekly. BOX 2174, Air Conditioning & Refrigeration News.

SALES ENGINEER, 29 years of age, single, free to go. 3 years college engineering. Graduate of leading manufacturers commercial engineering and sales schools. 5 years field application, selling and engineering. No salary jobs, drawing and commissions. Who wants a merchandiser? BOX 2180, Air Conditioning & Refrigeration News.

EXPERIENCED SALESMAN and manager seeking position with nationally known distributor of commercial and domestic refrigeration. Prefer Ohio territory. Excellent references. BOX 2184, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

NEEDED AT ONCE. Qualified, experienced refrigeration mechanic or engineer. Must be able to service and install ammonia and "Freon" commercial equipment. Must be in position to travel. Good salary and road expense. Rush reference to: CALVIN BRUCE REFRIGERATION, BOX 137, Brookings, S. Dak.

OPPORTUNITY: LARGE established manufacturer of electric drinking water coolers wishes to contact men of proven ability and if possible product experience, to handle sales in Mid-West and some Eastern territories. Prefer men between ages of 30 and 40 years. BOX 2132, Air Conditioning & Refrigeration News.

WANTED: DIRECT factory representative now calling on Pacific coast refrigeration distributors, for nationally advertised quality line of open-type self-service frozen foods cabinets. Excellent opportunity, full cooperation, prompt deliveries. Write full particulars, experience, lines handled, etc., to BOX 2167, Air Conditioning & Refrigeration News.

WANTED: DIRECT factory representative now calling on refrigeration distributors in Southern states; for nationally advertised quality line of open-type self-service frozen foods cabinets. Excellent opportunity, full cooperation, prompt deliveries. Write full particulars, experience, lines handled, etc., to BOX 2168, Air Conditioning & Refrigeration News.

SALES REPRESENTATIVES and distributors wanted middle western, southern states for automatic temperature alarm. Ability to contact freezer manufacturers, supply jobbers, and dealers. Bona fide inquiries on hand, deliveries prompt. Excellent profit or commission in exclusive territory dependent upon basis you wish to operate. BOX 2179, Air Conditioning & Refrigeration News.

WANTED: ENGINEER, act as chief of research development—application design light duty domestic air conditioning, oil burner and evaporative cooling blowers. Capable consulting with manufacturing customers heating and/or cooling equipment also guiding basic research air handling equipment. Include complete record training and experience. BOX 2182, Air Conditioning & Refrigeration News.

EQUIPMENT WANTED

WANTED: QUANTITY of $\frac{1}{4}$ and $\frac{1}{2}$ -hp. refrigeration condensing units. ACME REFRIGERATION CO., 634 Dean St., Brooklyn, N. Y.

INTERESTED in purchasing small plant for manufacturing gas heaters and stoves. Will consider manufacturing equipment only without building. BOX 2181, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

NEW 125-cu. ft. Portable walk-in all metal. Self-contained. 2-hp. compressor, gasoline or electric. Designed for 130 outside temperature; inside—10 to 40 water defrost. $\frac{4}{8}$ in. corkboard, lights. Length 105 $\frac{1}{2}$ in.; width 71 in.; height 82 in. Weather proof. Limited quantity. \$800. f.o.b. A-1 REFRIGERATION SERVICE, 735 No. Western Ave., Los Angeles 38, Calif.

ELECTRIC FANS and motors: Herman Nelson 1,800 CFM, complete with Century Electric Motors $\frac{1}{2}$ hp., 60 cycle, 1 phase, 1,750 RPM. About 28 available. A & B ELECTRIC REFRIGERATION CO., Macon, Ga.

HERE'S A buy. Priced for an immediate sale. Late type upright modernistic stainless steel freezers, fluorescents 16

and 21 cu. ft. Beverage coolers, dry type. Domestic evaporators can be used for many applications. ACME REFRIGERATION CO., 634 Dean St., Brooklyn, N. Y. ST. 3-3040.

IMMEDIATE DELIVERY—no waiting. Meat and delicatessen cases. Single duty and double duty. 8, 10, 12 ft. Dairy boxes. 7, 8, 10 ft. All complete with coils and fluorescent lighting. Franchises open throughout U. S. COMPLETE REFRIGERATORS SUPPLY, 92 7th Ave., New York City, N. Y. #WA-98190.

IMMEDIATE DELIVERY—New Air Conditioning Equipment. Weathermakers complete with motor, "Freon" coil, etc. 2 ton to 25 ton. SWSL, DWDI, and Twin Centrifugal Blowers, Propeller Fans, Heating and Cooling Coils, Evaporative Condensers, Self-Contained Air Conditioning Units. CONTROLTEMP EQUIPMENT SALES CO., 236 Butler St., Brooklyn 17, N. Y.

FOR SALE: 1,000 new flip covers and frame assemblies for freezers and ice cream cabinets. Two popular sizes. $\frac{1}{4}$ to 2 hp. new and remanufactured condensing units, also new aluminum ice cube trays. EDISON COOLING CORP., 310 E. 149th St., Bronx 51, N. Y.

REFRIGERATOR DOORS, new, product of Jamison. 24 outside doors 33 $\frac{3}{4}$ x 73 $\frac{1}{2}$ x 8 six inch cork insulation metal covered two gaskets three hinges with matching batten vestibule doors. Price one outside and two vestibule doors crated \$100 f.o.b. E. M. FAIRBANKS CO., 145-03 Seventh Ave., Whitestone, L.I., N. Y.

44-CU. FT. REFRIGERATORS, immediate delivery, with blower coil—\$389.92, with ice cube maker—\$422.92. Stainless steel interior, white enamel exterior, 4 doors. Remote type, condensing unit and valves are not included. Terms S.D.B.L. 10% deposit with order. J. GEO. FISCHER & SONS, INC., Saginaw, Mich.

IMMEDIATE DELIVERY freezers open and closed glass top, stainless steel top, canopy type, 20-44 cu. ft. Florist Dairy boxes, bottle coolers, double duty display cases. Ice cream cabinets, storage boxes, wood-metal. 4-6 can milk coolers, reach-in refrigerators. Water Fountains. FRIGIDTEMP CORP., 931 Bergen St., Brooklyn 16, N. Y. MA 2-9093.

HOME AND farm freezers, dry beverage coolers, ice cream cases, open type, frozen food cases with superstructure, reach-in refrigerators, all equipment with and without units. Immediate delivery. Attractively priced, exclusive distributorships available. GENERAL REFRIGERATORS CORP., 678 Broadway, New York (12), ST 9-1222.

YORK FLAKICE machine—model D.E.R.-10 with ice holding Box-Two (2)—2-hp. water cooled York compressors, fine condition. Sacrifice price. If interested call or write JACK A. MELTZER, 5817 Market St., Philadelphia 39, Pa.

FREEZERS—5 cu. ft. Designed for remote installation, complete with switch. No condensing unit. Close out price \$75, extra crating charge \$4. Quantity on hand 50. MOSS REFRIGERATOR CO., 154 Angeleno St., Burbank, Calif.

COMPRESSORS AND PARTS rebuilding—Compressors, float valves, water valves, low pressure controls, evaporators, water cooled condensers, condensing units and many other items replaced from our large stocks, or repaired upon receipt of your defective material. Send for our catalog—prices listed. REFRIGERATION MAINTENANCE CORP., 321 E. Grand Ave., Chicago, Ill.

FLOAT REPLACEMENTS. For replacing defective high side floats on all household units. Regular charging connection, capillary tube setup, internal strainer and exact mounting plate. Part #2000—Westinghouse (4 hole plate), and #2010 (3 hole plate); Part #2020—Gibson; Part #2030—General Electric (DR-1 & DR-2); Part #2040—For general replacement (undrilled plate). \$6.75 each. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56.

SEALED CROSLLEY TERMINALS. Installed from the outside in a few minutes without opening the compressor. Corrects leaky terminals on all Crosley "F-12" units. Set of three \$6.75 (Part No. 1020). Installation tool \$1.65. Immediate delivery. Money-back guarantee. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

FRIGIDAIRE METER-MISER Terminals. Installed from the inside. Fits compressors with bottom-mounted terminals. (Part No. 1060.) Set of three \$2.85. WESTINGHOUSE TERMINALS. Installed from the inside. (Part No. 1030.) Set of three \$2.85. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

NORGE CHECK VALVES. For open-type units. (Part No. 1040.) \$2.55 each. SEALED NORGE terminal, packing washers. For repairing leaky terminals. Installed from the outside in a few minutes. (Part No. 1050.) Three sets (9 washers) \$1.00. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

SEALED NORGE terminals. Complete assembly. Replaces shorted terminals. Installed from inside. (Part No. 1100.) Set of three \$2.85. Sealed Crosley terminals. Installed from inside. Part No. 1070 for SO2 models. Part No. 1080 for "F-12" models. Part No. 1090 for "F-21" models. Set of three \$2.85. SEALED UNIT PARTS CO., 3097 Third Ave., New York 56, N. Y.

UNDERBAR WORKBOARDS, cocktail stations, dry beverage coolers, and beer dispensers designed for water bath, circulating air, Tempite tanks and Penfo cooling systems, for immediate delivery, by one of the oldest bar interior equipment manufacturers in the East. SUPREME METAL FABRICATORS, INC., 27 Rodney St., Brooklyn 11, N. Y.

SECTIONAL WALK-IN coolers made of plastic plywood 4 in. and 6 in. of Fiberglas insulation. 8 ft. x 8 ft. x 7 ft. high. Write for prices and literature. ZERO REFRIGERATION CO., Saukville, Wis.

CUSTOM BUILT—10 $\frac{1}{2}$ cu. ft.—low temperature test cabinet (to minus 70° F.) 1-hp. two stage "Freon" unit self-contained-counter-balanced—lift tops. Used in instrument testing short time. BOX 2169, Air Conditioning & Refrigeration News.

NEW ALL-STEEL sectional walk-in coolers available for immediate delivery at attractive prices. Write for specifications and quotations. BOX 2188, Air Conditioning & Refrigeration News.

AIRFLOW CONDENSING units— $\frac{1}{2}$ -hp. twin-cylinder, 580 r.p.m., 4020 B.T.U. at 20 degrees suction and 90 degrees ambient temperature—with back-pressure control, flywheel and fan-belts. Price, less motor, \$88 in lots of 6 or more, f.o.b. N.Y.C. BOX 2189, Air Conditioning & Refrigeration News.

FRANCHISES WANTED

ATTENTION MANUFACTURERS! We are interested in securing distributorship franchises for high grade food store equipment accessories and specialties, territory: Maryland and District of Columbia. We are long established; well known in this field, and well financed. BOX 2185, Air Conditioning & Refrigeration News.

FRANCHISES AVAILABLE

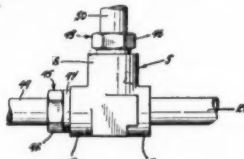
NYC MANUFACTURER has exclusive territory available for several select dealers who are capable of representing a quality line of sliding glass top display cabinets. Complete compressor and motor. Immediate shipments! FLEISCHMAN FREEZER CO., 275 East 140th St., Bronx 51, N. Y.

AGENTS WANTED throughout the United States and Foreign Countries to sell nationally advertised line of condensing units. State territory desired and other lines handled or present connections. Our present employees and agents know of this advertisement. Answers will be held in utmost confidence. BOX 2186, Air Conditioning & Refrigeration News.

PATENTS

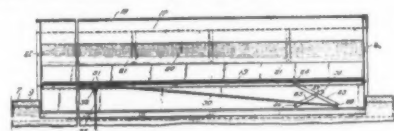
Week of Nov. 12

2,410,912. HEAT EXCHANGER. Edward A. Wenk, New York, N. Y., assignor to The Keystone Mfg. Co., Buffalo, N. Y., a corporation of New York. Application May 2, 1944, Serial No. 533,706. 9 Claims. (Cl. 285-22.)



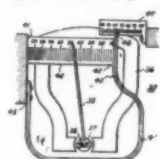
1. A heat exchanger, comprising a pair of tubes of different diameters fitted coaxially one within the other and each having its opposite ends flared, a T fitting at the opposite ends of said pair of tubes and each having one leg provided with a bore receiving the corresponding ends of said tubes, means providing a sealed joint between the larger of said tubes and the surrounding bore of said one leg of each of said fittings, means within said bore of each of said fittings and establishing communication between the interior of said larger tube and a second of said legs, said bore extending through the third of said legs, and means within said bore of each of said fittings and establishing sealed communication between the interior of the smaller of said tubes and said third of said legs.

2,410,950. VENTILATOR. Harold Kanton, Chicago, Ill., assignor, by mesne assignments, to Paul Dickinson Co., Chicago, Ill., a corporation of Illinois. Application July 28, 1943, Serial No. 496,493. 6 Claims. (Cl. 98-42.)



1. In a ventilator comprising a casing having an inlet and an outlet, a hollow angular rib permanently attached in the casing having sides flaring outwardly and downwardly but leaving a free space between it and the casing sides at the outlet, a damper to close the inlet and means to move the damper vertically from the inlet against the sides of said rib, said means comprising a combined lever having one portion pivoted in the inlet of the casing, another portion thereof pivoted to the damper, the two portions being pivoted together intermediate the ends of one of the portions, and a pull chain connected to the free extremity of one of the lever portions for raising them together with the damper about the member which is pivoted to the inlet wall.

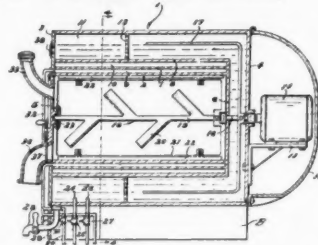
2,411,041. RELATIVE HUMIDITY MEASUREMENT. Frank Kahn, Philadelphia, Pa. Application Aug. 7, 1942, Serial No. 454,009. 12 Claims. (Cl. 73-338.)



1. In a direct reading relative humidity meter, a deflecting element responsive to the difference between the wet-air and dry-air temperatures of the air to be measured, a scale adapted to be varied in length, a pointer adjacent to said scale and constructed and arranged to be deflected over said scale proportionally to the deflection of said element, and means to vary the length of the scale such that

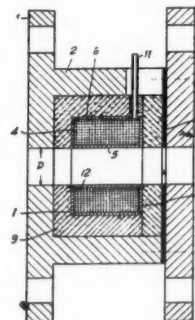
the sensitivity of indication of said pointer relative to said scale is in inverse proportion to the dry-air temperature in degrees F. less approximately 8° F.

2,411,081. FREEZING AND CARBONATING DEVICE. Jean C. Carothers, Sidney, Ohio. Application Dec. 2, 1943, Serial No. 512,642. 4 Claims. (Cl. 62-114.)



4. A freezing and carbonating unit comprising a cylindrical horizontal shell, a motor mounted on one end of said shell, a cylindrical freezing chamber mounted longitudinally in the shell in spaced, concentric relation thereto, the other end of the shell having an opening therein communicating with the freezing chamber, a closure for the opening, one end of the freezing chamber being closed and being spaced from said one end of the shell, means including said freezing chamber defining a carbonating chamber in the shell, a shaft journaled at one end in the closed end of the freezing chamber and at its other end in said one end of the shell and operatively connected to the motor, an agitator mounted on said shaft and operable in the carbonating chamber, and a dasher operable in the freezing chamber and operatively connected to the shaft.

2,411,120. TEMPERATURE MEASURING DEVICE. Hans von Hortenau, Stockholm, Sweden, assignor to Stig K. M. Billman, Stockholm, Sweden. Application Sept. 6, 1944, Serial No. 552,879. In Sweden Oct. 19, 1943. 2 Claims. (Cl. 201-63.)



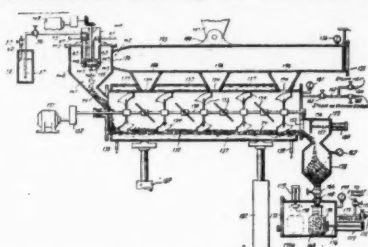
1. A temperature measuring device adapted to be inserted in a fluid conduit and comprising a casing constituting part of said conduit, an annular measuring member located in said casing and including a material the specific electric resistance of which is responsive to variations of temperature, the diameter of the inner cylindrical face of said measuring member being substantially equal to the inner diameter of said conduit, and heat insulating means disposed between said casing and the outer cylindrical face of said measuring member.

Week of Nov. 19

2,411,152. METHOD FOR FREEZING AND DRYING LIQUIDS AND SEMI-SOLIDS. Theodore R. Polson, New York, N. Y. Application May 2, 1941, Serial No. 391,561. 21 Claims. (Cl. 83-91.)

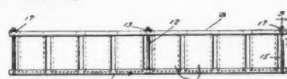
1. The method of freezing a substance including at least one liquid and at least one solid which comprises introducing said substance to be frozen in the form of small drops into a chamber, said chamber being under a vacuum so ex-

tremely high as to provide an extremely low vapor pressure of water and to effect instantaneous freezing of the substance



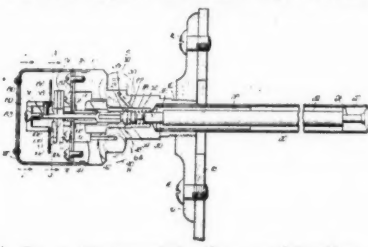
and the removal of the water vapor therefrom by vaporization, and agitating the frozen drops of said substance within said chamber while simultaneously applying heat thereto in order to remove practically all the moisture in said drops and while keeping them cooled below freezing.

2,411,193. FREEZING TRAY. Roy M. Cummins, Akron, Ohio. Application Feb. 20, 1945, Serial No. 578,828. 2 Claims. (Cl. 62-108.5.)



1. A freezing tray for refrigerators comprising upper and lower elongated plates, said upper plate having a plurality of openings, tubes formed on the under side of the upper plate beneath the openings, said lower plate having a plurality of recesses adapted to receive the lower ends of the tubes for closing said lower ends, and bolts securing the plates to each other.

2,411,295. CONTROL MECHANISM. Erwin Saballus and Carl W. Fischer, Chicago, Ill., assignors to The Powers Regulator Co., Chicago, Ill., a corporation of Illinois. Application Jan. 5, 1944, Serial No. 517,026. 13 Claims. (Cl. 236-87.)



5. In a thermostat, the combination of a base mounting having a diaphragm chamber and a supply chamber spaced from and communicating with said diaphragm chamber, said mounting having a supply passage to said supply chamber and a control passage to said diaphragm chamber, a supply valve for controlling supply from said supply chamber to said diaphragm chamber, resilient means for urging said valve to closed position, a diaphragm closing said diaphragm chamber, an exhaust valve seat member communicating with said diaphragm chamber and atmosphere, said exhaust valve seat member having an exhaust valve seat, an exhaust valve for said exhaust valve seat for controlling exhaust from said diaphragm chamber to atmosphere, control means for controlling operation of said diaphragm and exhaust valve, said control means including a temperature sensitive expansible member secured to said base mounting, a non-expansible member movable by the expansible member, means of selective and variable resistance for resisting expansion of said expansible member, and means carried by said non-expansible member adjustable and operative in alignment with said non-expansible member and said valves to vary the compression between said last named means and said means of variable resistance for varying the sensitivity of said thermostat.

(To Be Continued)

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Refrigeration Problems And Their Solution

By P. B. Reed

For Service and Installation Engineers



Manager, Refrigeration
and Air Conditioning
Division, Perflex Corp.

Electric Currents (3)

HIGHER RESISTANCE: LOWER AMPERAGE

The greater the resistance, the less the flow of current, which is, of course, just what would be expected. Thus a motor or other device consuming electric current uses current at a higher rate of the resistance if the motor is low than if it is high.

If motor "A" draws twice the amperage of motor "B," then motor "A" has one-half the resistance of motor "B." Putting it another way, the amperage varies *inversely* as the resistance.

AMPERAGE INCREASES WITH VOLTAGE INCREASE

2. The amperage also varies as the voltage. If we remember that the voltage represents the *pressure* it is quite reasonable that if the voltage, or pressure, is increased it will force current through the line faster. So if there is a fixed resistance, such as a light bulb on a 110 volt line drawing one ampere, and the voltage of the line is increased to 220 volts the amperage will also double, that is, it will go to 2 amps.

The passage of current through the filament of the light bulb causes heat, and if the filament and the bulb was designed to be used on 110 volts it could stand the heat set up by the 1 ampere, but not by the 2 amperes. So on 220 volts it would get so hot that it would melt or "burn out" the filament.

A fixed resistance like a light bulb, a toaster, or other heat or light making electric device draws a fixed amount of current in amperes as long as the voltage stays steady.

Increase the voltage, the current increases; reduce the voltage, the current decreases. Looking at it another way: the *load* which may be considered as represented by the amperage, drops off as the voltage does, or rises as the voltage rises.

Not so with a motor. There the load is mechanical, outside the control of the voltage. The compressor or fan takes so much mechanical power to operate it. An electric motor is like a willing horse; the more load is put on him the harder he tries to pull it, even though he may hurt himself trying.

If the load is increased on a motor it too tries to carry it and will go ahead trying even though the load is so great that the motor destroys itself (burns out) in the attempt.

AMPERAGE, VOLTAGE, AND RESISTANCE INTER-RELATED

So, the current through a resistance increases as the voltage increases and as the resistance decreases. We can therefore say:

$$A = V \div R$$

$$\text{or } A = \frac{V}{R}$$

which is another way of saying that A, the amperage increases as the voltage V increases and as the resistance R decreases, for the fraction V/R increases if V becomes greater or if R becomes less, and therefore A increases, for the fraction V/R equals A.

Let us take a piece of resistance wire and suppose V, the voltage, equals 110 and the resistance R equals 5 ohms (the ohm is the unit of resistance) then:

$$A = \frac{110}{5}$$

$$\text{or } A = 22 \text{ amperes}$$

If we put this wire on a 220 volt circuit instead of 110 we have:

$$A = \frac{220}{5}$$

$$\text{or } A = 44 \text{ amperes}$$

Again, let us cut this wire in half and put one piece of it back on the 110 volt circuit. The resistance will only be one-half what it was or 2½ ohms. So:

$$A = \frac{110}{2\frac{1}{2}}$$

$$\text{or } A = 44 \text{ amperes}$$

This is a famous law of physics known as Ohm's Law and a knowledge of it is necessary to an understanding of electrical measurement. Thus, we can determine how many amperes are flowing if we know the voltage V in volts and resistance R in ohms.

Or if we know any two of the three we can determine the third. If we know the voltage and the amperage, the resistance is:

$$R = \frac{V}{A}$$

That is, if the voltage is 110 volts and the amperage is 10 amps, the resistance must be 11 ohms, for

$$R = \frac{110}{10}$$

Thirdly, the voltage in volts equals the resistance in ohms times the amperage, so

$$V = R \times A$$

If the resistance is 55 ohms and the current 20 amps the voltage can be calculated as 110 volts for

$$V = 55 \times 2$$

is loss of pressure from one point in the line to another point.

If the suction line is long and/or small and if it is carrying a large amount of gas, the pressure drop is great. Same thing is true with electricity.

VOLTAGE DROP: EXAMPLE

In the preceding paragraphs we have been discussing voltage drop in discussing Ohm's Law. If a light bulb is connected across a 110 volt line the voltage drop *through* the bulb is 110 volts. But suppose that the line up to the bulb from the generator had quite a bit of resistance in it, say 10 ohms, then, if the filament of the bulb had 55 ohms the total resistance of the two resistances in series (one after another) is 65 ohms. Thus the current flowing in the circuit is:

$$A = \frac{110}{65}$$

$$\text{or } 1.7 \text{ amperes}$$

This 1.7 amps flows through both the line resistance and the bulb resistance so, since the resistance of the line is 10 ohms and the amperage is 1.7 amps then the voltage drop must be

$$V = A \times R$$

$$\text{or } V = 1.7 \times 10$$

$$= 17 \text{ volts}$$

Since 17 volts are lost in the line and there is just 110 volts to start with, then there is only 110 less 17, or 93 volts across the light bulb. It should have a full 110 volts and 2 amperes to burn brightly, but since it has only 93 volts and 1.7 amps it does not burn as brightly as it should.

(To Be Continued)

Ranco



Ranco
Type O-1419
Commercial
Control

10,000,000 CUSTOMERS MUST BE RIGHT!

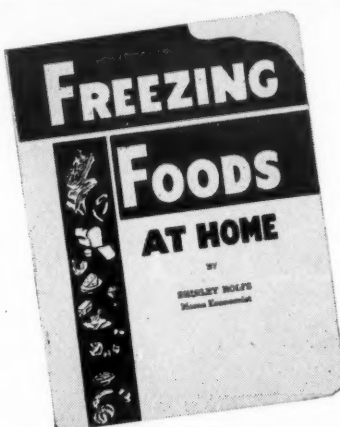
Proof of the pudding is not "in the eating" in this case; it's "in the using." More than 10,000,000 Ranco Controls have been purchased and used in the refrigeration industry.

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The new home freezer guide

"Freezing Foods At Home"

by Shirley Rolfs

This book was written to fit the requirements of the thousands of people who want to learn how to use a home freezer effectively . . . present and prospective owners alike. You can use FREEZING FOODS AT HOME as a premium, a sales tool, to lay the groundwork for home freezer sales. FREEZING FOODS AT HOME will show your customers what they can do with a home freezer and how it can be used to ease the burden of meal preparation. This new home freezing guide in the hands of your home freezer prospects will help increase your sales volume. Order today.

COMPLETE INSTRUCTIONS

Beginning with the selection of products, FREEZING FOODS AT HOME provides instructions for their preparation for freezing, storage periods, thawing, cooking, and serving. The logical arrangement of the contents makes the instructions easy to follow. The introduction explains fully, but briefly, the fundamental rules applying to the freezing preservation of foods. Packaging and wrapping is discussed in detail. Other sections cover the freezing of vegetables, fruits, poultry, meat, fish, eggs, and cooked foods.

AUTHORITATIVE

FREEZING FOODS AT HOME was written in close connection with the American Meat Institute, Poultry and Egg National Board, and research references of others, including manufacturers, state colleges, and authorities in the frozen foods field. It is a dependable handbook.

96 pages of clear, concise instructions.

Written specifically for the homemaker.

Illustrated with colored meat charts, photographs and tables.

Price: \$1.00 per copy. Use order blank below.

BUSINESS NEWS PUBLISHING CO.

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☐ Remittance enclosed*. ☐ Send bill.

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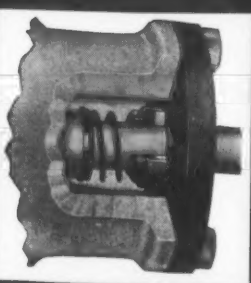
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Boyce's Promotion Brings Wm. MacMurtrie to Philco

PHILADELPHIA — William MacMurtrie, who is widely known throughout the radio industry, with which he has been identified since 1921, has been appointed general purchasing agent of Philco Corp.

Raymond A. Boyce, former general purchasing agent and a member of the board of directors, has been promoted to director of purchases and will concentrate on over-all planning and general administrative work on the staff level.

Dealer Priority --

(Concluded from Page 1, Column 3) houses built under terms of the housing permit.

Non-veterans, however, can now get housing permits to construct homes for their own occupancy and thereby stand a better chance of getting a new home built.

The housing permit, issued to individuals by the Federal Housing Agency, provides that a dwelling for which a permit is granted, must be suitable for year around occupancy, that the total calculated floor space must not exceed 1,500 sq. ft. (excluding basement and unfinished attic), and that no more bathroom fixtures be installed than are normally used in one bathroom.

Alterations and repairs exceeding \$400 also require a permit.

On the continuing effect of previously granted priorities, the regulation says:

"New authorizations and priority ratings under Housing Expediter Priorities Regulation 5 will not be issued after the effective date of this section (Dec. 24). However, this section does not apply to or affect dwelling accommodations heretofore approved under Civilian Production Administration (OTC) Priorities Regulation 33 or Housing Expediter Priorities Regulation 5.

"Any requests for changes in applications filed under those regulations which do not involve additional dwelling units shall be made in accordance with CPA Priorities Regulation 33 or Housing Expediter Priorities Regulation 5, whichever is applicable."

The National Housing Agency points out that any builder who uses HH priority ratings to complete a house or alterations to a house, must continue to accept the responsibilities that go with the priorities, namely, veteran preference or rental or sale, and maximum rental provisions.

Nov. Household Washer Sales Record Drop from Oct. Level

CHICAGO—Factory sales of household washing machines for November totaled 216,634, showing a drop of 30,716 from the previous month, according to a report by the American Washer and Ironer Manufacturers' Association. Sales for November, 1941, were reported at 103,288.

Household ironer sales were 11,973 for November, compared to 11,754 for the preceding month and 8,780 for November, 1941, the association's figures indicated.

Washer sales for the first 11 months of 1946 totaled 1,827,991, compared to 1,846,833 for the same period of 1941. Ironer sales totaled 109,147 in 1946, compared to 122,904 for the same period in 1941.

Sales, Servicing School Helps Train New Norge Representatives

DETROIT—Newly appointed sales representatives of the Norge division of the Borg-Warner Corp. have been attending a school designed to familiarize them with all phases of product merchandising and servicing for each of the company's lines. These men in turn will aid the regional managers and distributors in carrying this information to the retailers, according to M. G. O'Harra, vice president and director of sales.

Final phase of the training is to take place during the Mid-Winter Furniture Market, when the new representatives will work with other members of the sales department in presenting the product features to visitors at the Norge display in the American Furniture Mart.

Following four weeks attendance

at the school here, the representatives visited the Norge plants located at Muskegon, Mich. and Effingham and Herrin, Ill. Here they viewed each of the products in actual manufacture.

Among the new district sales rep-

8,000,000 at Frigidaire --

(Concluded from Page 1, Column 5)

time to war production. Reconversion back to the normal production of refrigeration products was started in July of 1945.

(It may be well to note that these figures refer to "electrical refrigeration products," not just household refrigerators. Frigidaire produces other refrigeration items.)

representatives receiving the training are:

Robert M. Reed, Philadelphia, who for the last year has been sales manager of Trilmont heaters for Trilling & Montague, Philadelphia, Norge distributor. During the war he served with the Office of Price Administration and the War Production Board. Mr. Reed studied at Princeton.

Edward L. Murtagh of Cambridge, Mass. has had wide experience in sales and promotion in nine years with the Lever Bros. washer division. During the war he served in the Navy. He attended Fordham University.

From Royal Oak, Mich. there is J. W. Webster, who has 13 years' experience in sales and sales pro-

motion. He studied at Knox College.

C. A. Marvin, Edwardsville, Kan., has had 20 years' in the refrigeration field as distributor's salesman, manufacturer's agent, and service man. He attended the University of Illinois.

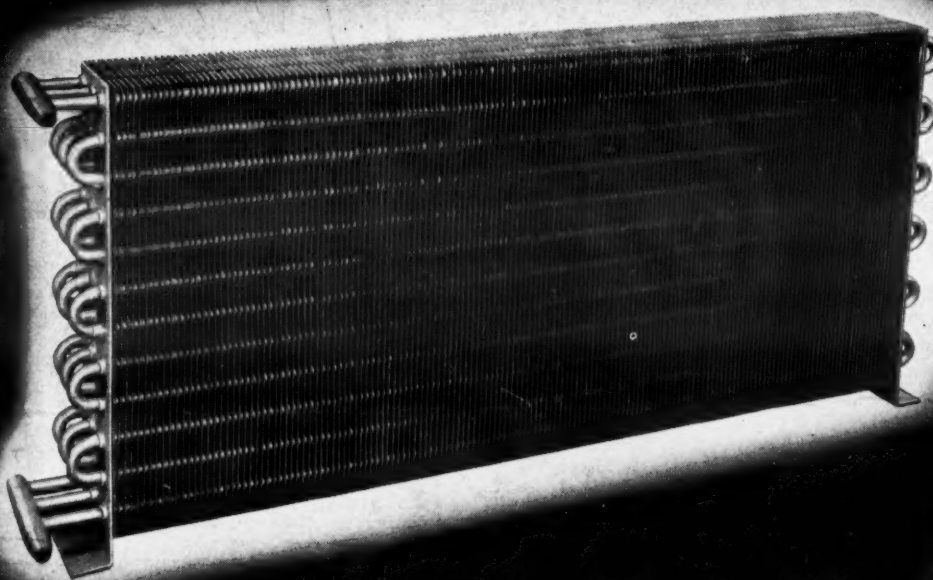
J. H. Baine, Jr., who lives in Memphis, has served with Norge distributors and dealers. He was a Navy transport pilot and received his education at Soule College.

Frank H. Toler is a resident of Great Falls, Mont. and a graduate of the University of Montana. His business experience has been in sales and merchandising. Mr. Toler was in the army four years.

Charles H. Alden is from Berkeley, Calif. He has had both retail and direct selling activity in several lines. During the war Mr. Alden was in charge of International Business Machine equipment for the Kaiser shipyards.

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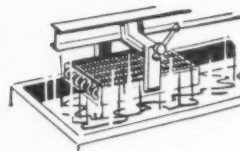


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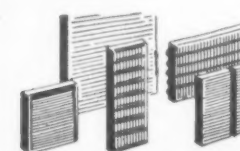
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